



REPORT OF THE  
**Hydro-Electric Power**  
**Commission**  
OF ONTARIO  
**1923**

MR. WILLS MACLACHLAN

CA20NEP  
-A55

*Wills MacLachlan*



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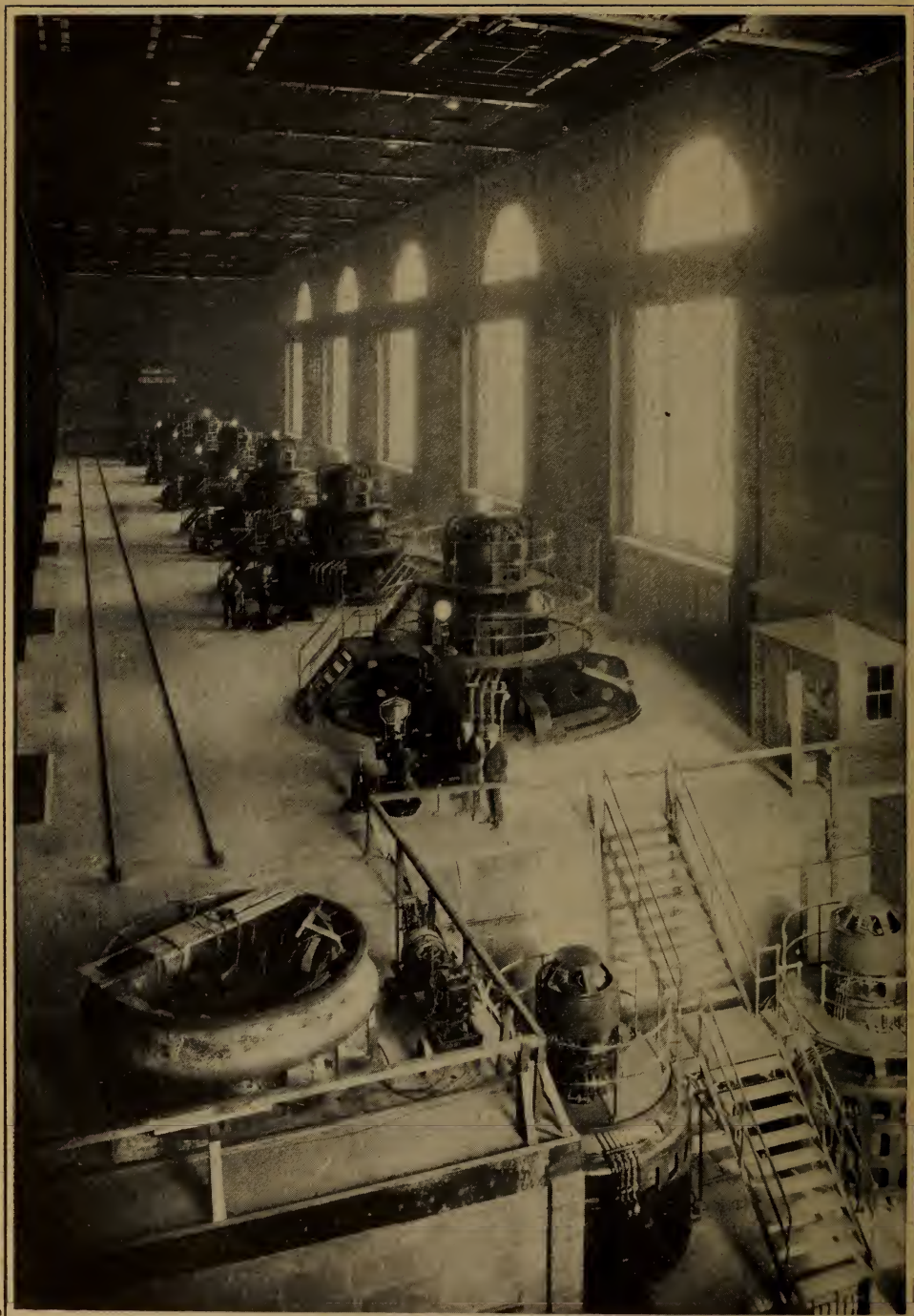
The Estate of the Late  
Wills MacLachlan, '06



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QUEENSTON-CHIPPAWA POWER DEVELOPMENT  
Interior of power house at Queenston showing six units installed

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Ontario Hydro-Electric Power  
Commission

(Sixteenth) Annual Report

OF THE

# HYDRO-ELECTRIC POWER COMMISSION

OF THE

PROVINCE OF ONTARIO

FOR THE YEAR ENDED OCTOBER 31st

## 1923

PRINTED BY ORDER OF  
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1924

# HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO

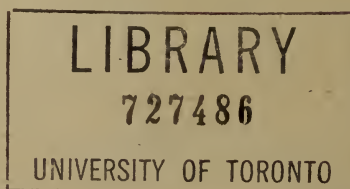
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HON. SIR ADAM BECK, KT., LL.D., M.L.A. .... *Chairman*

HON. J. R. COOKE, M.L.A. .... *Commissioner*

W. W. POPE. .... *Secretary*

F. A. GABY. .... *Chief Engineer*





*To His Honour* THE HONOURABLE HARRY COCKSHUTT,  
*Lieutenant-Governor of Ontario*

MAY IT PLEASE YOUR HONOUR:

The undersigned has the honour to present to your Honour the Sixteenth Annual Report of the Hydro-Electric Power Commission of Ontario for the fiscal year ending October 31, 1923.

This Report covers all of the Commission's activities and also embodies the financial statements of the municipal electric utilities operating in conjunction with the various systems of the Commission and supplying electrical service to the people of the Province. The financial statements, the statistical data, and the general information contained herein have been so arranged as to present clearly and concisely every important feature of the Commission's operations.

The Report deals with all phases of the operations of the Commission for the past year with respect to 13 systems to which are connected 356 municipalities, including 107 townships and rural districts, and 110 industrial companies. The Report also shows the cumulative financial results for the various periods during which operation has been maintained.

Industrial conditions throughout the Province during the year have been considerably below normal, with a consequent reduction in the demand for power for industrial uses. Notwithstanding this adverse industrial condition, there has been a considerable growth in the demand for power on all systems, and on several systems the Commission has reached the limit of the capacity of the existing generating plants. It is, therefore, necessary for the Commission, on practically all systems, to make arrangements to secure additional power developments to meet the ever-increasing demand.

The first five units of the Queenston-Chippawa plant, on the Niagara system, are operating and loaded to capacity, and the Commission is proceeding with the installation of three additional generating units.

In the Thunder Bay system a number of large, long-term contracts for the supply of power have been signed with the various companies which will require all of the available generating capacity of the Cameron Falls development on the Nipigon river.

The following tabulation shows the growth in load on the various systems during the year:

### DISTRIBUTION OF POWER TO SYSTEMS

#### 20-MINUTE PEAK HORSEPOWER

System	October 1922	October 1923
Niagara system.....	259,269	321,448
Severn system.....	7,450	7,070
Eugenia system.....	5,750	5,925
Wasdells system.....	655	700
Muskoka system.....	1,432	1,415
St. Lawrence system.....	4,479	5,877
Rideau system.....	3,183	3,137
Thunder Bay system.....	11,260	16,958
Ottawa system.....	11,394	12,528
Central Ontario and Trent system.....	33,390	37,332
Nipissing system.....	1,642	1,769
Power Customers.....	226,040	271,327
Total.....	<u>565,944</u>	<u>685,486</u>

The cumulative results of the operation of the systems to date as set out in this Report exhibit a remarkably healthy financial condition.

You will observe that this Report is divided into two parts, namely, a section which deals with the operations of the Commission in the generation, transformation and transmission of electrical energy to the municipalities, and a section which deals with the various operations of the municipalities in the distribution of power to consumers.

The total investment of the Hydro-Electric Power Commission of Ontario in power undertakings and hydro-electric railways is \$178,960,696.56, and the investment of the municipalities in distributing systems and other assets is \$62,892,504.90, making a total investment of \$241,853,201.46 in power and hydro-electric railway undertakings.

The following is a statement showing the capital invested in the respective systems and municipal undertakings:

Niagara system.....	\$141,427,301.22
Essex County system.....	412,536.15
Thorold system.....	102,094.82
Severn system.....	1,478,546.62
Eugenia system.....	2,182,333.89
Wasdells system.....	419,418.35
Muskoka system.....	215,123.42
St. Lawrence system.....	1,045,624.50
Rideau system.....	1,083,079.21
Thunder Bay system.....	6,864,225.62
Ottawa system.....	26,040.09
Central Ontario and Trent system.....	12,159,555.16
Nipissing system.....	870,774.16
Service buildings, construction plant, stores, etc.....	2,771,019.60
Hydro-electric railways.....	7,903,023.75
	<u>\$178,960,696.56</u>
Municipalities' distributing systems and other assets—all systems....	62,892,504.90
Total investment.....	<u>\$241,853,201.46</u>

It is most gratifying to the Commission to be able once again to report that the revenue obtained from the consumers has been more than sufficient to meet



the full cost of generating and transmitting power and to provide for all operating expenses and the fixed charges of municipal utility plants.

The Commission collected from the municipal utilities and other customers, for power sold, a total sum of \$15,742,831.91, which was appropriated to meet the expenses of administration and operation, and to set aside adequate sums in respect of sinking fund, renewals and contingencies, leaving a net balance of \$345,588.41 collected in excess of requirements, which was returned to the municipalities, and applied in the reduction of their power bills for the year.

The following statement summarizes the Commission's collections from municipal Hydro utilities and other power customers for the year, and shows how they have been appropriated:

Revenue from municipalities and other power customers.....	\$15,742,831.91
Appropriated as follows:	
Operation, maintenance, administration, interest and other current expenses.....	\$13,126,377.98
Reserved for sinking fund, renewal of plant and equipment and for future contingencies.....	2,270,865.52
	<u>15,397,243.50</u>
Net surplus, collected in excess of requirements, returned to the municipalities.....	<u>\$345,588.41</u>

A summary of the financial operation of the municipalities during the year is shown below:

Total revenue collected by the municipalities.....	\$17,219,044.46
Cost of power.....	\$8,699,026.67
Operation, maintenance and administration.....	3,901,739.92
Debenture charges and interest.....	2,607,741.71
Depreciation.....	916,782.75
	<u>16,125,291.10</u>
Total.....	
Surplus for the year.....	<u>\$1,093,753.36</u>

The above covers only the municipalities operating under cost contracts with the Commission.

The total reserves of the Commission and the municipalities for sinking fund, renewals and contingency purposes amount to \$33,807,234.83, as follows:

Niagara system.....	\$9,108,010.62
Essex County system.....	115,796.94
Thorold system.....	102,110.68
Severn system.....	319,274.24
Eugenia system.....	256,675.13
Wasdells system.....	72,283.23
Muskoka system.....	32,791.67
St. Lawrence system.....	154,946.72
Rideau system.....	57,067.44
Ottawa system.....	2,031.35
Central Ontario and Trent system.....	1,408,985.80
Nipissing system.....	79,810.20
Service buildings, etc.....	303,453.79
	<u>\$12,013,237.81</u>
Total reserves on Commission's property.....	
Total reserves Municipalities.....	<u>21,793,997.02</u>
Total Commission and Municipal reserves.....	<u>\$33,807,234.83</u>

Attention is called to a remarkable statement in the introduction to Section X, Municipal Accounts, on page 314, in which will be found a list of thirty

municipalities with quick assets of cash, bonds, and accounts receivable, in excess of all liabilities including the balance of their debenture debt, which may fairly be considered as being entirely out of debt. There are also twenty-four additional municipalities in which the balance of liabilities in excess of quick assets is so small that it is expected most or all of them will be out of debt at the end of the present year.

The municipalities' consolidated balance sheet on page 319 shows a total cash balance of \$1,276,140.06 and bonds and other investments of \$1,153,424.47, or an increase of \$821,290.00 over such corresponding assets in 1922. The total surplus in the municipal books now amounts to \$14,465,138.33 in addition to a depreciation reserve of \$7,328,858.69.

Following is a summary of the operations which are detailed in the Report.

#### NIAGARA SYSTEM

The Niagara system embraces all the territory lying between Niagara Falls, Hamilton, and Toronto on the east and Windsor, Sarnia and Goderich on the west, served with energy generated at Niagara Falls.

The Commission has a total capital, including the capital invested in the Queenston-Chippawa development, the Ontario Power Company and the Toronto Power Company, of \$141,427,301.22 and accumulated reserves of \$9,108,010.62.

The actual cost of power was \$290,935.43 less than the amount of the estimate on which the interim rates were based. The municipalities show a net surplus from the year's operation of \$706,149.27 after providing depreciation to the extent of \$786,890.00. Only eight municipalities showed an actual deficit during the year, aggregating \$38,751.89, out of a total revenue of \$14,529,113.05. There has been a gradual increase in the number of customers and in the loads supplied to the municipalities.

The municipalities and other customers of the Niagara system were supplied with power generated by three separate plants, namely, the Queenston generating plant, the Electrical Development Company plant, and the Ontario Power Company plant. These properties have been operated as separate units, and their operations were merged at the end of the year to obtain the average cost of power generated at Niagara Falls for the Niagara system, which worked out to a cost of \$14.45 per horsepower per year. This average cost included all carrying charges of every nature on the three systems with the exception of sinking fund and depreciation on the Queenston plant.

At the time of the opening of the Queenston-Chippawa plant, the statement was made that with a load of 250,000 horsepower the cost of generation from the three plants combined would be less than \$15.00 per horsepower, and it is gratifying to note that this prediction has been verified at this early date.

#### SEVERN SYSTEM

The Severn system is supplied from the Big Chute development on the Severn river with arrangements for auxiliary supply from the Eugenia system, the Wasdells system and the Orillia plant at Ragged Rapids. This system supplies seventeen municipalities and three rural power districts all situated south of Georgian bay and west of lake Simcoe.

The Commission has a total capital in this system of \$1,478,546.62 and accumulated reserves for renewals, sinking fund and contingencies of \$319,274.24.

The actual cost of power was \$36,630.97 less than the amount of the interim bills, and this amount has been rebated to the municipalities.

The municipal records show a net surplus from the year's operation of \$53,900.32 after providing for depreciation to the extent of \$13,568.00. One small village had a deficit of \$52.12; all of the other municipalities had a clear balance on the year's operation.

#### EUGENIA SYSTEM

The Eugenia system is supplied with power from a generating plant situated at Eugenia Falls on the Beaver river about twelve miles south of Georgian bay and serves twenty-five municipalities and two rural power districts in that territory.

The Commission has a total capital in this system of \$2,182,333.89 and accumulated reserves for renewals, sinking fund and contingencies of \$256,675.13.

The actual cost of power during the year was \$2,458.41 less than the estimates on which the interim rates were based and the municipalities operated with a net surplus for the year of \$32,113.49 after providing for depreciation to the amount of \$17,417.66. Five municipalities only operated with a loss, the largest amount being \$415.56.

#### WASDELLS SYSTEM

The Wasdells system, with a generating plant located at Wasdells Falls on the Severn river and also connected up with the Severn and Eugenia systems, and with the Orillia municipal plant, supplies eight villages, two rural power districts and two industrial loads, all situated east of lake Simcoe.

The Commission has a total capital in this system of \$419,418.35 and accumulated reserves for renewals, sinking fund and contingencies of \$72,283.23.

The actual cost of power during the year was \$6,336.63 less than the estimates on which the interim rates were based and the municipalities operated with a net surplus of \$18,453.99 after providing for full depreciation. In no case was there any loss.

#### MUSKOKA SYSTEM

The Muskoka system is supplied from a development at High Falls on the Muskoka river and serves the municipalities of Huntsville and Gravenhurst.

The Commission has a total capital of \$215,123.42 and accumulated reserves of \$32,791.67.

While the actual cost of power was \$1,298.61 more than the amount of the interim bills, the municipalities in the operation of their electric utilities absorbed this additional charge and operated with a net surplus of \$2,899.30 after providing full depreciation.

#### ST. LAWRENCE SYSTEM

The St. Lawrence system serves the district immediately to the north of the St. Lawrence river between Brockville and Cornwall; the supply of power for the system being purchased from the Cedar Rapids Transmission Company, delivery being made from a point near Cornwall. Service is given to ten municipalities, four rural power districts and four companies.

The Commission has a total capital of \$1,045,624.50 and accumulated reserves for renewals, sinking fund and contingencies of \$154,946.72.

The actual cost of power was \$13,399.41 less than the amount of the interim bills and the municipalities operated with a net surplus of \$62,952.60 after providing for full depreciation. Three municipalities in this system show a total deficit of \$1,931.01.



## RIDEAU SYSTEM

The Rideau system serves the district in the vicinity of Smiths Falls, Perth and Carleton Place; power being supplied from a development at High Falls, on the Mississippi river, from the Carleton Place generating plant, and also being purchased from the Rideau Power Company.

Growth in the use of power on this system is resulting in taxing the capacity of the existing sources of power supply. The water storage works of the Mississippi River Improvement Company, controlling the waters above the High Falls development, through disrepair, allowed the storage to be depleted early in the year. This, together with the additional demands of the system due to growth, made it necessary to operate a steam plant owned by the corporation of Smiths Falls, in order to supplement the supply of power for the system during the months of January, February, and March. Additional expenses were incurred thereby, which reflect in the annual operating statement of this system.

The Commission has a total capital of \$1,083,079.21 and accumulated reserves for renewals, sinking fund and contingencies of \$57,067.44.

The actual cost of power was \$5,802.48 more than the amount of the interim bills.

One municipality shows a loss of \$2,041.17, while the other four show a net surplus of \$14,950.49 after providing for full depreciation.

## THUNDER BAY SYSTEM

The Thunder Bay system is situated north of Lake Superior, and comprises that section of the Province adjacent to the Twin Cities of Port Arthur and Fort William. It is supplied with power from a development constructed by the Commission on the Nipigon river at Cameron Falls, approximately 60 miles northeast of the city of Port Arthur.

The total capital on the books of the Commission on October 31, 1923, was \$6,864,225.62.

The only municipal load supplied at the present time is that of the city of Port Arthur. The city of Fort William has, however, executed a contract with the Commission and will become a co-partner at the end of 1926 at the expiration of its contract with the Kaministiquia Power Company, from which source its supply of power is received at the present time.

Port Arthur operated during the year with a net surplus of \$79,555.44, after providing for depreciation to the extent of \$13,500.00.

During the year the demand for power increased very rapidly and long-term contracts were secured from two large pulp and paper industries, one being that of the Great Lakes Power Company for minimum firm power amounting to 10,000 horsepower, and the other being that of the Guaranty Investment Corporation with its mill located at Nipigon village, the minimum firm power amounting to 4,000 horsepower. The growing load in Port Arthur, with the additional demands of these two pulp and paper industries, necessitated the installation of two additional units and the extension of the power house. The installation of the equipment is now proceeding and will be in operation during the coming year. The existing loads with other contracts now being negotiated will necessitate proceeding with the completion of the plant for six units as rapidly as construction work can be carried on. That the judgment of the Commission in locating the development on the Nipigon river instead of at Silver Falls—the Dog lake site—on the Kaministiquia river has been amply justified, is borne out by the fact that the Kaministiquia Power Company

has been unable to secure sufficient stream flow for its plant situated on the same river to supply its customers in the city of Fort William, and has, moreover, completely exhausted the storage in Dog lake. This failure to provide power for its customers from the Kaministiquia River development made it necessary for the company to negotiate a contract with the Commission for a supply of power from the Nipigon development and the Commission is making arrangements accordingly in order that the industries in the district may not suffer from lack of power. Had the Commission yielded to the criticism to which it was subjected at the time when additional development was considered for the Thunder Bay district and located a development at Silver Falls, not only would the development at that location have been insufficient to take care of the existing load in Port Arthur, but it would have been unable to assist the Kaministiquia Power Company in its present situation.

There is every indication that the demand for power in the coming year will be sufficient to meet both operating expenses and interest charges in full.

#### CENTRAL ONTARIO SYSTEM

The Commission operated this system in the same manner as in the period commencing with March 1, 1916. The nucleus of this system was the group of properties controlled by the Electric Power Company, Limited, and operated by it through the agency of twenty-two subsidiary companies. These properties were all purchased by the Province of Ontario on March 1, 1916, and have been operated by the Commission as trustee for the Province since June 1, 1916. Since that date the system has been greatly enlarged and expanded to meet the constantly growing needs of the district.

Steady growth of load caused the Commission to decide on the construction of new developments on the Trent river. The power sites at Dam No. 8 and at Dam No. 9 near Campbellford were selected as the most suitable and the work of construction was commenced. These two developments will add approximately 10,000 horsepower to the capacity of the system. It is intended to complete them by the summer of 1924.

The financial results of the operations of the year were very satisfactory. After meeting all operating and maintenance costs, all interest, all sinking fund on that portion of the investment for which sinking fund provision is required, provision for renewals reserve of \$130,511.24, and provision for contingencies reserve of \$78,441.20, a net surplus of \$32,439.59 was available.

It is worthy of note that the total reserves which have been set up out of earnings for the benefit of this system now amount to \$1,488,796.00.

#### TRENT SYSTEM

The twelve municipalities operating their own distribution systems under cost contracts with the Commission in the district known as the Central Ontario system have been grouped under the above heading. They are served with energy from, and are considered as customers of, the Central Ontario system.

Their combined operation for the year shows a net surplus of \$79,117.29 after providing for \$20,993.07 depreciation. One municipality shows a loss of \$51.68 but this covers only two months' operation.

Respectfully submitted,

ADAM BECK,  
*Chairman*

TORONTO, ONTARIO, March 31st, 1924.

HON. SIR ADAM BECK, KT., LL.D., M.L.A.,  
*Chairman, Hydro-Electric Power Commission of Ontario,*  
*Toronto, Ontario.*

SIR,—I have the honour to transmit herewith the Sixteenth Annual Report of the Hydro-Electric Power Commission of Ontario for the fiscal year ended October 31st, 1923.

I have the honour to be,

Sir,

Your obedient servant,

W. W. POPE,  
*Secretary*

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## MAP

TRANSMISSION LINES AND STATIONS OF THE HYDRO-ELECTRIC POWER COMMISSION OF ONTARIO - - - - -	At end of volume
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SIXTEENTH ANNUAL REPORT  
OF THE  
Hydro-Electric Power Commission  
of Ontario

SECTION I  
LEGAL PROCEEDINGS

HIS MAJESTY, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, in 1923 passed four special Acts relating to the work of the Hydro-Electric Power Commission of Ontario. These Acts are reproduced in full as Appendix I to this report. The short titles to the said Acts are as follows:

- The Power Commission Act, 1923, Chapter 12.
- The Rural Hydro-Electric Distribution Act, 1923, Chapter 13.
- The Hydro-Electric Negligence Act, 1923, Chapter 39.
- The Guelph Railway Act, 1923, Chapter 40.

The agreements between the Hydro-Electric Power Commission of Ontario and the Municipalities and Corporations mentioned in the list hereunder given were approved by Order-in-Council dated the 25th day of July, 1923.

CITIES

Welland.....	July 4, 1919
TOWNS	
Ford City.....	May 4, 1922
Ford City.....	Sept. 15, 1922
Orangeville.....	Mar. 25, 1916
Riverside.....	May 10, 1922
Riverside.....	Sept. 12, 1922
Tecumseh.....	June 2, 1922
Tecumseh.....	Sept. 1, 1922
Trenton.....	May 17, 1922

VILLAGES

Beaverton.....	Mar. 20, 1913
Belle River.....	Aug. 18, 1922
Cannington.....	Mar. 10, 1913
Embros.....	May 5, 1914
Hensall.....	April 14, 1916
Marmora.....	Dec. 19, 1920
Merlin.....	Mar. 28, 1922
St. Clair Beach.....	Oct. 31, 1922
Tavistock.....	Feb. 28, 1916
Thornton.....	April 12, 1919
Woodville.....	Aug. 15, 1913

POLICE VILLAGES

Agincourt.....	Jan. 31, 1922	Granton.....	Jan. 26, 1916
Comber.....	Sept. 12, 1914	Sunderland.....	Aug. 15, 1913
Dorchester.....	July 5, 1915	Wellesley.....	April 14, 1916



## TOWNSHIPS

Ancaster.....	May 2, 1922	Mara.....	April 26, 1921
Anderdon.....	Oct. 23, 1922	Mariposa.....	Dec. 15, 1922
Blandford.....	Feb. 13, 1922	Markham.....	May 1, 1922
Blenheim.....	April 15, 1922	Moore.....	July 10, 1922
Bosanquet.....	Feb. 7, 1922	North Dumfries.....	Feb. 18, 1922
Brant.....	Nov. 7, 1921	Oakland.....	April 3, 1922
Caradoc.....	April 3, 1922	Oro.....	1921
Clinton.....	May 4, 1922	Reach.....	Sept. 11, 1922
Dover.....	June 28, 1922	Rochester.....	June 12, 1922
Easthope North.....	Aug. 28, 1922	Saltfleet.....	Dec. 15, 1921
Easthope South.....	Sept. 1, 1922	Sandwich South.....	May 19, 1922
East Oxford.....	May 4, 1922	Sandwich West.....	April 8, 1922
East Zorra.....	April 13, 1922	Scarborough.....	June 19, 1922
Ekfrid.....	May 20, 1922	Scarborough.....	June 19, 1922
Flamboro East.....	April 3, 1922	South Dorchester.....	Nov. 15, 1916
Gosfield South.....	Jan. 27, 1923		(Nov. 16)
Grantham.....	Oct. 9, 1922	Stephen.....	April 3, 1922
Hay.....	May 10, 1921	Toronto.....	April 1, 1922
Humberstone.....	Oct. 2, 1922	Toronto.....	July 1, 1922
Kingston.....	June 5, 1922	Usborne.....	June 3, 1922
Lancaster.....	Sept. 8, 1922	Vaughan.....	Nov. 8, 1922
Lobo.....	Jan. 8, 1923	Waterloo.....	Aug. 26, 1922
London.....	May 15, 1922	West Oxford.....	May 2, 1922
Louth.....	April 13, 1922	Woodhouse.....	Feb. 25, 1922
Maidstone.....	June 12, 1922	Woolwich.....	Aug. 1, 1922

## CORPORATIONS

Armstrong Brothers & C. S. Parker.....	Oct. 10, 1922
Christie, Henderson & Co., Ltd.....	July 1, 1922
Eugene F. Phillips Works, Ltd.....	April 20, 1922
Grand Trunk Railway Co. of Canada.....	May 10, 1922
Grenville Crushed Rock Company, Ltd.....	Mar. 1, 1922
Hanover Cement and Stone, Limited.....	Dec. 30, 1922
International Nickel Co. of Canada, Ltd.....	Aug. 24, 1922
P. Lyall & Sons Construction Co., Ltd., (12,000 volt power).....	Oct. 19, 1922
P. Lyall & Sons Construction Co., Ltd., ( 2,200 volt power).....	Oct. 19, 1922
Ontario Gypsum Co., Ltd.....	Sept. 9, 1922
D. Robertson & Co., Limited, Toronto.....	July 1, 1922
Streetsville Lumber Co., Toronto.....	Sept. 5, 1922
Victoria Road Mutual Electric Association.....	Nov. 7, 1922

By-laws and agreements of a number of municipalities were submitted to the Commission for approval during the year. These by-laws and agreements dealt with various matters, such as, working arrangements for operation, acquiring assets of a number of local distribution systems, street lighting in townships, etc. These documents were duly examined and approved or amended. The practice of collection of arrears of rates was in a number of instances brought in line with the Statutes. Agreements covering the acquisition of a number of local franchises were prepared. A large number of other legal matters were also dealt with, e.g., a conflict of trade mark and name; control of railway fares; standard forms for bonds; sales tax, etc.

The construction and operation of power line crossings over railways and the operation of the various lines of electric railways now controlled by the Commission necessitated many attendances before the Ontario Railway and Municipal Board.

## **RIGHT-OF-WAY AND LANDS**

### **Land Survey and Title Records**

Surveys of all lands purchased or acquired are being carefully gone over, and a title record book, available for general departmental use, is being compiled, giving full details of the land, including a description and a plan which is plotted as a permanent record. About two thousand separate records have been made to date and there remain about one thousand transfers to record. When compiled with current purchases of property, this title book will form a most complete record of the lands owned by the Commission.

In addition to the above a complete record has been made of all tree trimming rights, and of easements for both high- and low-tension lines.

### **Toronto and Niagara Power Company**

The lands and assets included in the city of Toronto distribution system were transferred to that city. Assessments on buildings in a number of municipalities were the subjects of appeal in quite a number of cases and were satisfactorily disposed of in accordance with the provisions of the Power Commission Act. A number of expiring leasehold rights were renewed. That in connection with the steam plant on the water front in the city of Toronto is still under negotiation. Railway sidings across the right-of-way in the city of Toronto have necessitated the preparation of leases and agreements.

### **Toronto and York Radial Railways**

The improvement of the service of these railways on Yonge street, Kingston road and the Lake Shore road made necessary better and more frequent passing sidings on those roads. To secure these, arrangements have been made with the provincial Department of Public Highways and the approval of the Ontario Railway and Municipal Board obtained. The subdivision of lands adjoining these railways rendered it necessary to provide more numerous crossings. A satisfactory method of obtaining security in the case of lost freight has been put in practice.

### **Power Lines**

During the year work on the power development plant at Bingham Chute on the South river near Powassan was commenced and carried to completion and similar work was begun and is at present in progress at Dam No. 8 and Dam No. 9 on the Trent river near Campbellford. This work necessitated the purchase of a considerable quantity of land in both cases for flooding purposes, operators' residences, etc. The questions of riparian rights and titles of the various properties acquired were duly investigated.

### **High-Tension Lines**

A steel-tower line has been constructed from Stoney Creek on the Queenston-Hamilton line across Burlington bay to connect with the section "B.B." line at Nelson Junction. The necessary rights were secured from the Department of Marine at Ottawa and from the Hamilton Harbour Board, also from private owners interested in this connection.

A similar line has been built to link up York station with the lines of the Toronto and Niagara Power Company near Islington and the right-of-way purchased.

A third line from the new power house at Queenston to Allensburg has been completed and the right-of-way partially purchased.

One arbitration took place during the year. The case concerned the right-of-way for the railway connecting the Queenston power house with the Michigan Central station, the owner of the land and the Commission being unable to agree on the price to be paid. This is the only case where it has been found necessary to resort to arbitration during the past six years.

Sites of operators' residences have been purchased at Dam No. 8 on the Trent river, at Powassan and in three locations on the line between Cameron Falls and Port Arthur, and right-of-way is now being secured for the new tower line to Fort William.

Station sites have been acquired in the following places:—Bridgeman avenue and Wiltshire avenue (Toronto), Pinedale, Sedore, Warkworth, Mountjoy, Lakeview, and St. Davids.

Properties no longer required for the purposes of the Commission at Port Hope, Newburgh, Chippawa, Cornwall, and East Flamboro have been sold.

Steps have been taken to lease the right-of-way of the high-tension line between St. Thomas and Windsor at nominal rentals to the various farmers from whom the lands were acquired. Over two hundred and fifty leases have been issued to date.

### Rural Lines

Construction work on rural lines has been carried on in the following townships during the year:

Beverly, Brock, Charlottenburg, Chatham, Delaware, Dover East, Harwich, Howard, Kingston, Lobo, London, Louth, Maidstone, Mariposa, Moore, Niagara, Orford, Saltfleet, Sarnia, Southwold, Scarboro, Thorold, Vaughan, Waterloo, Wellesley, West Oxford, Westminster, Whitby, Woolwich, York.

### Low-Tension Lines

Work to a greater or lesser extent has been carried on during the year on the following lines:

Crossing Trent river, Meyersburg,  
Warkworth substation to Warkworth,  
Peterboro,  
Chesley to Paisley,  
Hanover to Walkerton,  
Mount Forest to Harriston,  
Durham to Mount Forest,  
Junction Pole to Meaford,  
Chatsworth to Owen Sound,  
Walkerton to Kinloss Jct.,  
Kinloss Jct. to Kincardine.  
Cornwall to Howard-Smith distributing sta.,  
Martintown to Lancaster,  
Brockville to Morrisburg,  
Morrisburgh to Prescott,  
Rapide Plat canal,  
Yonge St. to Mountjoy station,  
London to Lucan,  
Guelph to Rockwood,  
Guelph to Acton,  
Hespeler to Christie Henderson Co., Plant,  
Christie Henderson Co. & D. Robertson Co.,  
Seaforth to Clinton Feeder,  
Huron road East of Goderich,  
Windsor to Walkerville,

Grimsby to Beamsville,  
City of St. Catharines,  
Lansing to Oriole,  
Mountjoy to Stouffville,  
South Falls to Waubashene,  
Niagara River telephone system,  
Preston to Kitchener,  
County road South of Hespeler,  
Stratford to Sebringville Jct.,  
St. Thomas station—Kent station,  
Essex-Walkerville,  
Essex station—Canadian Salt Company,  
Sarnia to Wisbeach,  
Corunna to Courtright,  
Tecumseh road to Walkerville,  
St. Thomas-Aylmer,  
Woodstock-Ingersoll,  
H.O. Cereal Co. (Ayr, Ont.),  
Brantford,  
Cooksville to Brampton,  
Forest to Thedford,  
Fletcher-Merlin,  
Thamesville-Bothwell,  
Wallaceburg,  
Port Arthur lines—Dorion twp., Nipigon.



This work involved the acquisition of a large number of pole and anchor rights as well as tree trimming rights.

The construction of the rural and low-tension lines on the various highways of the province and the improvement of roads by the Department of Public Highways and many of the counties has rendered it necessary to carry on a great deal of correspondence and negotiation with the provincial Department of Public Highways and the highway superintendents of roads in the various counties in reference to the moving of poles, tree trimming, etc.

Following is a summary of the transactions completed by the Department during the year:

Number of parcels of land purchased.....	44
Number of rights for towers and overhangs secured.....	99
Number of rights for poles secured.....	334
Number of rights for anchors secured.....	117
Number of tree trimming agreements secured.....	156
Number of damage claims settled.....	89

## SECTION II

### OPERATION OF THE SYSTEMS

During 1923 the operation of all systems continued under very similar conditions to those outlined in the last Annual Report, the chief problems in operating arising out of the increase of load to a point where it demands the full plant capacity, making it difficult to take equipment out of service for maintenance or alterations, and affecting regulation of voltage. In spite of the difficulties encountered in this respect, and the usual troubles common to all machinery and operating equipment, service has been maintained at a high standard, and it has not been necessary to make any extensive curtailments in the supply of power to customers.

The growth in the load has been general. From reference to the table given herein, showing the total power generated and purchased, it will be noted that the total output has increased by the remarkable amount of 549,000,000 kilowatt-hours, an increase of 24 per cent, over the preceding year, which, in its turn, showed a marked increase over 1921.

The maximum demand or peak load of the various systems is also higher, showing considerable increases in some cases, as may be seen by referring to the graphs given in this section. This increase in the peak load has not been as great as the increase in the average load, but owing to the diversity in time of peaks, it is difficult to sum them up and give a general figure representing the amount or rate of this increase. The peak loads of the generating plants, given in the table, show that practically all plants have been loaded at times close to, or beyond, normal capacity, but due to the interconnections between plants and diversity in time of peaks, these figures do not indicate the demands of the various systems. Examination of the figures for individual systems shows an increase in the peak load on practically all—the rate of increase varying. On a number of systems the maximum demand has approached the normal generating capacity so closely that no marked increase in peak load is possible until additional sources of power are available, and on some systems the supply of power is limited by the stream flow, the regulation of which, and of storage levels, is outside of the Commission's control.

The restrictions imposed by the available capacity have, in some instances, operated to prevent much increase in the maximum load, but even including those systems where no curtailment in the supply has been necessary, the relatively greater increase in the average load indicates that the public, generally, is making a greater use of power, that is, using it for a greater number of hours each day or month. The ratio of the average load to the maximum demand is technically known as the load factor and, from an operating standpoint, this increased load factor means that equipment is required in service for a greater number of hours each day, and consequently that there is less opportunity for taking it out of service for maintenance or repairs. Looked at from a broader



standpoint, it means that a greater amount of service is being obtained from the same amount of equipment and the same capital expenditure, and the increase is, therefore, a matter for congratulation.

Summing up the general load conditions, it may be noted that the demand for power has taxed very closely, and even to an alarming extent, the capacity available on the Niagara system, on the Central Ontario and Trent system, the Rideau system, the Nipissing system, the Severn, Eugenia and Wasdells systems, and the Muskoka system. The generating capacity should be sufficient to permit generating units or pieces of equipment to be taken out of service for maintenance work to guard against trouble developing, and in cases of accident it should be sufficient to permit of the same thing being done for purposes of repair, without cutting off the supply of power to consumers. The word "alarming" is used to indicate that the margin between demand and capacity is too small to permit of such maintenance and repair work.

On the Niagara system the power supply was augmented by 60,000 horsepower in December, and by a further 60,000 horsepower in April, through the completion of the fourth and fifth units at Queenston. The supply of 30,000 horsepower under a temporary arrangement with the Canadian Niagara Power Company was terminated in December, reducing the net increase in capacity at that time to 30,000 horsepower. The margin between the demand and the capacity to supply was so narrow that when ice trouble occurred in February, reducing the output, it was necessary to operate the steam plant in Toronto in order to carry the Niagara system load. The completion of the fifth unit at Queenston in April, adding another 60,000 horsepower to the capacity, relieved the situation during the summer months, but the total increased capacity for the year, as stated above, has been only 90,000 horsepower, and the Niagara system peak at the end of this fiscal year shows an increase of 82,688 horsepower over the same month of last year. Therefore, the situation on the Niagara system has been relieved only to the extent of 7,000 horsepower, which, on a load of the magnitude of the Niagara system, is only about 2 per cent, and the normal increase in load during November and December will demand more than this amount.

The growth in the demand for power has been such that the output of each new generator at Queenston has been absorbed almost as soon as it became available. This condition, referred to in the previous year's report, has continued during the past year. The usual decline in the load during the summer months, which followed the completion of the fifth unit in April, 1923, largely offset the underlying growth, but as reference to the load graphs for Queenston and the Niagara system will show, even under those conditions, part of the output of No. 5 generator was required immediately following its completion, and the large increase in the demand as autumn approached has called for the operation of all five units at practically full capacity. From the above it is evident that the Commission and its engineers have shown great foresight in anticipating the demand for more power, constructive ability in planning and providing the necessary plant in sufficient time, and constant care and skill in operating and maintaining it in service, so that the large section of Ontario served from the developments at Niagara suffered no loss and inconvenience during the past year from lack of power.

On other systems the demand for power has pressed even more closely on the capacity available.

On the Central Ontario and Trent system the output of the new generating plant at Ranney falls has been nearly all absorbed, and due to insufficient stream flow at times, some slight power shortages occurred, as explained in detail in Appendix III in last year's Annual Report, and in the section of this year's Report dealing with the Central Ontario and Trent system. Owing to the flexibility in the daily distribution of water, this system has always been able to carry its peak loads when sufficient water has been available to meet its average demand, but the peak load has now reached a point at which it severely taxes the available capacity of the system, and in the near future further sources of power must be provided.

On the Severn, Eugenia and Wasdells systems curtailment in the supply of power to the consumers was only avoided by the purchase of all available power, the co-operation of the engineers of the Department of Railways and Canals in maintaining as high a stream flow as possible, and by the construction of a frequency-changer station which permitted the transfer of 1,000 horsepower from the Niagara system.

The generating plant at South falls on the Muskoka system has been loaded to its maximum capacity.

On the Nipissing system it was necessary during January, February and March to operate the Commission's steam plant at North Bay to full capacity in order to assist in carrying the load, and due to the unusually low stream flow, reducing the possible output from the plant at Nipissing, the two stations were unable to supply the full amount of power demanded.

The Thunder Bay system had some surplus capacity, but not sufficient to permit of one generator being kept out of service for maintenance or repairs, and continuation of the present rate of growth in the load will make the situation more difficult from an operating standpoint, demanding the installation of additional generating units.

On the Rideau system it was necessary to operate local steam plants to relieve the power shortage due to lack of water during the winter of 1922-1923.

From the above it will be seen that on all systems, except the St. Lawrence, the problem of maintaining a supply of power to meet the demand is serious, and further that no system has sufficient surplus capacity to permit power being diverted to relieve the situation elsewhere without prejudicing the supply to the consumers on the system from which it might be taken. The necessity for skill and care in the operation of existing stations, to insure the maximum safe and continuous output, is as obvious as is the need for the provision of further sources of supply.

## TOTAL POWER GENERATED AND PURCHASED

Plant	Normal operating capacity horsepower	Peak load horsepower	Total output during fiscal year kilowatt-hours
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## HYDRO-ELECTRIC GENERATING PLANTS

Niagara: Queenston plant.....	295,000	276,139	884,770,000
Niagara: Ontario Power Co. plant.....	171,000	172,252	846,938,700
Niagara: Toronto Power Co. plant.....	145,000	147,185	641,775,000
Big Chute.....	5,760	5,760	24,797,060
Eugenia Falls.....	6,170 <i>d</i>	6,133	12,335,000
Wasdells Falls.....	940	1,180	3,122,161
South Falls.....	1,400	1,480	5,810,722
High Falls.....	2,400	2,680	6,012,274
Carleton Place.....	400	375	390,354
Cameron Falls.....	26,000	17,158	66,917,200
Sidney, Dam No. 2.....	4,020	5,094	15,068,700
Frankford, Dam No. 5.....	3,485	3,432	13,068,400
Ranney Falls, Dam No. 10.....	9,650	11,394	39,377,520
Campbellford, Dam No. 11.....	4,020	4,303	13,764,400
Heely Falls, Dam No. 14.....	12,060	15,818	17,943,600
Auburn, Dam No. 18.....	2,010	2,681	10,060,030
Fenelon Falls, Dam No. 30.....	1,000	1,045	3,745,600
Nipissing.....	1,740	1,769	5,851,145
Totals, hydro-electric plants.....	692,055	675,878 <i>b</i>	2,631,747,866

## STEAM PLANTS

Toronto steam plant.....	20,000 <i>c</i>	10,016	59,140
North Bay steam plant.....	470	635	474,230
Smith Falls (plant rented).....	268	335	174,408
Totals, steam plants.....	20,738	10,986 <i>b</i>	707,778

## POWER PURCHASED

Company or Commission	Contract amount horsepower	Peak horsepower	Total purchased kilowatt-hours
Canadian Niagara Power Co.....	20,000	39,544	132,101,560
Cedar Rapids Power Co.....	6,630	6,630	23,082,500
Rideau Power Company.....	650	1,099	2,372,862
Orillia Water, Light & Power Commission..	800	3,217	5,309,290
Ottawa and Hull Power & Mfg. Co.....	14,500	12,528	42,186,000
Campbellford Water & Light Commission..	1,609	2,278	2,894,650
Peterboro Hydraulic Power Company.....	.....	2,733	1,521,025
Canadian General Elec'ric Co., Peterboro..	.....	1,573	441,641 <i>a</i>
Wingham Utilities Commission.....	.....	102	51,533
Total purchased.....	44 189	69,704 <i>b</i>	209,961,061
Grand total, 1923.....	756,982	756,668 <i>b</i>	2,842,416,705
Grand total, 1922.....	704,289	729,348 <i>b</i>	2,293,447,600
Increase.....	.....	.....	548,969,105 = 24 per cent

*a* Part in connection with exchange power arrangement.

*b* Peak totals given are direct sums of plant peaks as shown without allowance for diversity in time. Therefore these totals do not indicate the demands on the various systems where there is more than one plant supplying power.

*c* Peak rating only.

*d* Capacity varies according to storage or head water level.



## NIAGARA SYSTEM

During the past year the supply of power to the Niagara system was greatly augmented with the placing in service of the fourth generator at Queenston, of 60,000 horsepower capacity, on December 1, 1922, and further increased on April 8, 1923, when the fifth Queenston generator of similar capacity was placed in service.

At the beginning of the fiscal year an arrangement with the Canadian-Niagara Power Company was in effect covering the temporary supply of 50,000 horsepower. The Canadian-Niagara Power Company had need of more power, and gradually cut down the amount sold to the Commission to 20,000 horsepower by December 31, 1922. This 20,000 horsepower is covered by a definite contract for sixteen years. The reduction of 30,000 horsepower in the supply of purchased power partly offset the increase gained by the completion of the fourth generator at Queenston, and during the winter months, until the completion of the fifth unit at Queenston, the demand for power continued to tax closely the capacity of the Commission's plants.

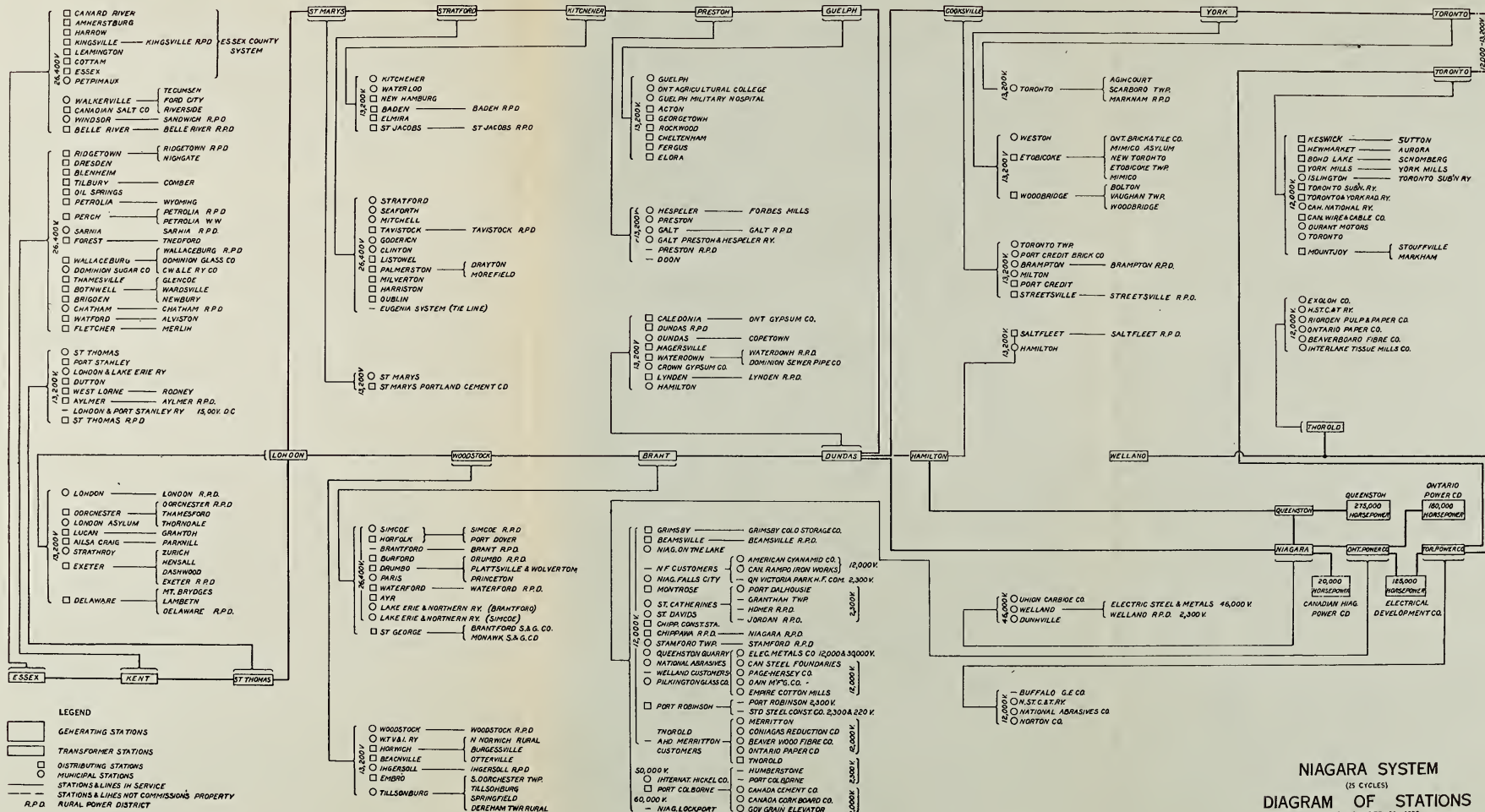
The power supply available to the 110,000-volt system from Queenston, and from the Ontario Power Company plant to the Niagara step-up transformer station, and thence to the 110,000-volt system, was continuous, and not a total interruption to the 110,000-volt supply is attributable to generating station failures. During the year power was received at the main 110,000-volt switching station at Dundas 99.982 per cent of the total time. The main interruption (which totalled in time 93 per cent of the total interruptions) occurred on November 23, when the transformers and low-tension switching equipment in the Dundas station were destroyed, while the high-tension busses and equipment were badly smoked. Within one hour and thirty-three minutes after the beginning of this trouble, the Operating Department's field staff had made emergency repairs and connections, and power was again restored to the 110,000-volt lines beyond Dundas. The damaged portion of the station has been completely rebuilt with heavy duty equipment, and the high-tension section extended to accommodate the new high-tension lines being constructed, provision being made for the installation of two more line breakers.

At York, on December 4, 1922, the temporary York station, with the exception of the high-tension transformer bank, was destroyed by a fire which originated in the low-tension section. High-tension service was unaffected by the trouble, but some inconvenience was caused the customers fed from this station, it being necessary to limit their load for a time.

Some damage was caused at Woodbridge and Fergus distributing stations, where, due to lightning, a short circuit developed on the bus work inside the station. The maintenance staff was able, with but a few hours' interruption, to restore service to these customers.

During the year electric storms were reported on forty-three days, the first occurring on April 19, and the last on September 28. Twelve of the storms were of a general nature, traversing the larger portion of the system, while that of June 25, in the Cooksville and Guelph districts, was accompanied with heavy gales, which destroyed houses, barns, fences, etc., and damaged a number of our 13,200-volt feeders to a greater or less extent.

Anticipating increased demands on a number of the Commission's 110,000-volt stations, the capacity of these was increased as follows: At York, three



NIAGARA SYSTEM  
(25 CYCLES)  
DIAGRAM OF STATIONS  
AS AT OCTOBER 31, 1932  
HYDRO-ELECTRIC POWER COMMISSION  
OF ONTARIO

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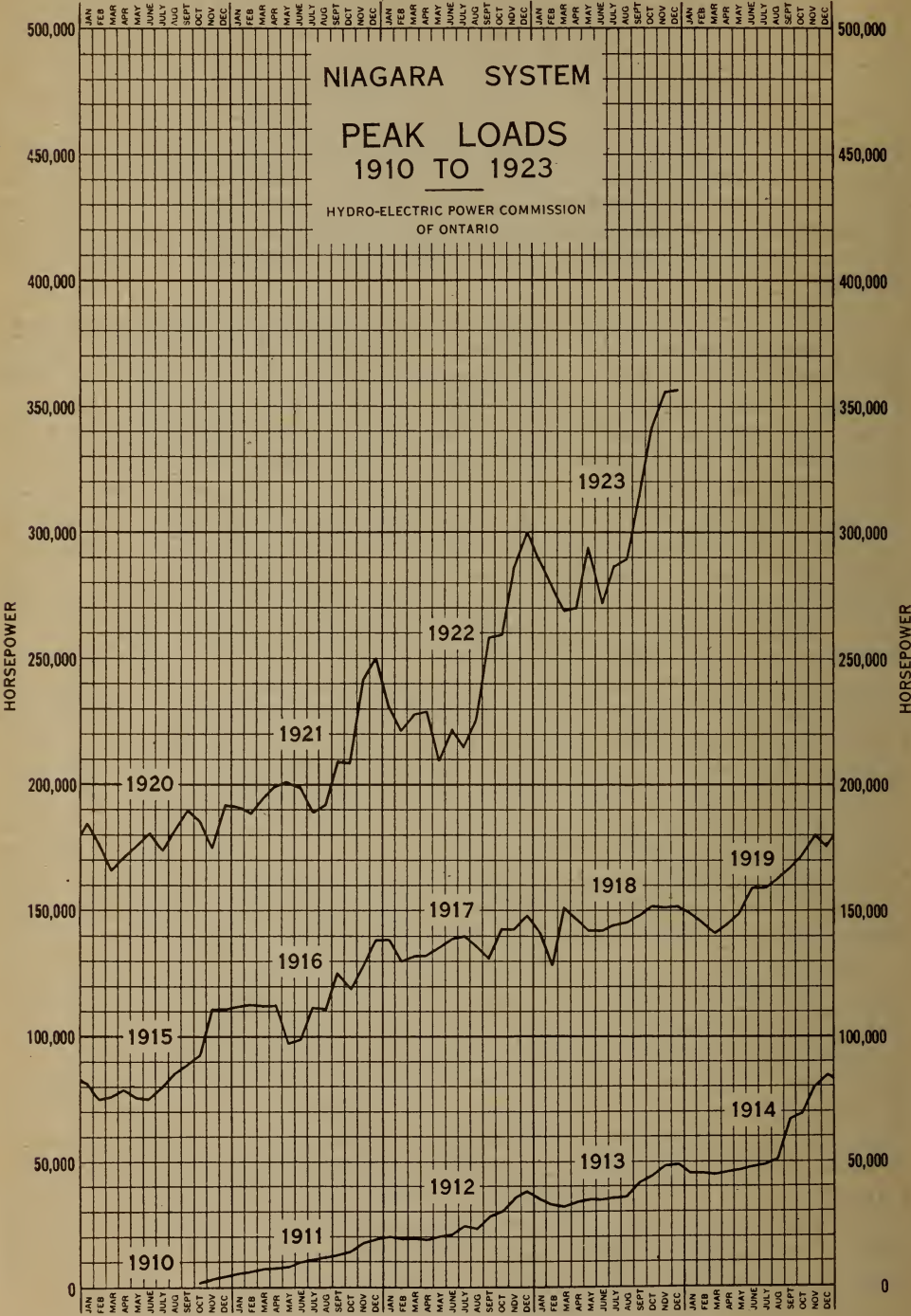


5,000-kv-a. transformers replaced three of 1,250-kv-a. capacity; at Hamilton, a second bank of three 5,000-kv-a. transformers was placed in service; at Stratford, the capacity was increased from 3,750 kv-a. to 7,500 kv-a.; at London, three 5,000-kv-a. units replaced three 2,500-kv-a. transformers, increasing the total capacity at this point to 30,000 kv-a.; at Preston, three 1,250-kv-a. transformers replaced three 750-kv-a. units, making station capacity 7,500 kv-a.; at Woodstock, three 1,250-kv-a. transformers were replaced by three 2,500-kv-a. transformers; at Essex, a second bank of three 5,000-kv-a. transformers replaced the bank of three 2,500-kv-a. units; at Toronto, a bank of three 5,000-kv-a. transformers was installed immediately outside and to the north of the present station building; at Dundas, a bank of three 5,000-kv-a. transformers replaced the two banks of 2,500-kv-a. units which were destroyed in the fire of November 23.

During the year changes at the following distributing stations occurred: at Etobicoke station, one 1,500-kv-a., three-phase transformer was added; at Georgetown, two 300-kv-a., three-phase units replaced a bank of three 150-kv-a. transformers; at Streetsville, three 75-kv-a. units were replaced with three 150-kv-a. transformers; at Preston high-tension station, three 20-kv-a. transformers in the Preston rural service were replaced with three 75-kv-a. units; at Brant high-tension station, three 50-kv-a. transformers were added for the St. George and the Sand and Gravel Company's loads in Brantford district; at St. Mary's Portland Cement station, one 1,500-kv-a., three-phase transformer replaced three 150-kv-a. units; at Cooksville high-tension station, the three 350-kv-a. transformers used to supply the frequency changer set and also a portion of the Toronto township load were replaced by three 50-kv-a. transformers. The three 350-kv-a. transformers along with the frequency changer set were moved to Mount Forest in order to supply power to the Eugenia system from the Niagara system. At Port Credit, one 300-kv-a., three-phase, outdoor-type transformer was added; at Hagersville, one 300-kv-a., three-phase, outdoor-type transformer was added; at Beachville, three 150-kv-a. transformers replaced three 75-kv-a. units; at Ridgetown, three 150-kv-a. transformers replaced three 75-kv-a. units; at Caledonia, two 300-kv-a., three-phase units replaced three 150-kv-a. transformers; at Norwich, three 150-kv-a. transformers replaced a bank of three 75-kv-a. transformers; at Aylmer, three 75-kv-a. units replaced three 50-kv-a. transformers, and at Milton Pressed Brick Company, three 75-kv-a. transformers replaced three 30-kv-a. units.

The following new distributing stations were placed in service during the year: Woodstock rural, with three 37½-kv-a. transformers; Perch, with three 75-kv-a. transformers; Belle river, three 50-kv-a. transformers; Grimsby, one 300-kv-a., three-phase, outdoor-type transformer; Beamsville, one 300-kv-a., three-phase outdoor-type transformer; Fletcher, one 150-kv-a., three-phase, outdoor-type transformer; Chippawa, one 300-kv-a., three-phase, outdoor-type transformer; Norfolk, one 300-kv-a., three-phase, outdoor-type transformer; Etobicoke township, one 300-kv-a., three-phase, outdoor-type transformer; Dundas rural, one 300-kv-a., outdoor-type transformer; St. Thomas rural, one 150-kv-a., three-phase transformer; Mount Joy, one 150-kv-a., three-phase, outdoor-type transformer; Christie-Henderson Line Company, near Hespeler, three 50-kv-a. transformers.

The routine duties necessary in the operation and maintenance of the Commission's extensive network of lines were effectively carried out by the line maintenance field force. In addition a great amount of work was required on a number of the Commission's feeders in order to have the pole locations





conform with the new road boundaries resulting from the construction of the Provincial highways.

Insulator testing on the 110,000-volt lines was carried on during the summer months, and of some 121,174 units tested, approximately 2.6 per cent were found defective and replaced.

The remaining ground cable (with exception of the one cable on the peak of the tower) on the 110,000-volt towers was completely removed, and the reinforcing of the loops on the lines between Niagara, Dundas and Toronto was finished early in the year.

In the Cooksville district the Streetsville and Milton feeders were completely reinsulated, and sections blown over by the storm of June 25, totalling some five or six miles, were rebuilt. A large portion of the work was done with the line alive, using special tools.

A number of new lines and feeders totalling a considerable mileage were placed in service during the year.

The Station Maintenance department has carried out the usual general overhaul of all 110,000-volt oil-breakers and lightning arresters on the system. In addition, all low-tension oil-breakers and lightning arresters were periodically inspected and overhauled when necessary.

Transformers which failed in service were rebuilt. These included high-tension transformers at Dundas and Preston, and low-tension units at Tilbury, Wallaceburg, Ridgetown, Bothwell, Essex, Waterford, Drumbo, Norfolk, Port Credit, Baden, and Etobicoke.

At Brant, London, St. Thomas, Kent, and Essex, insulators on the horn-gap towers, which had given a great deal of trouble, were replaced by units of later design.

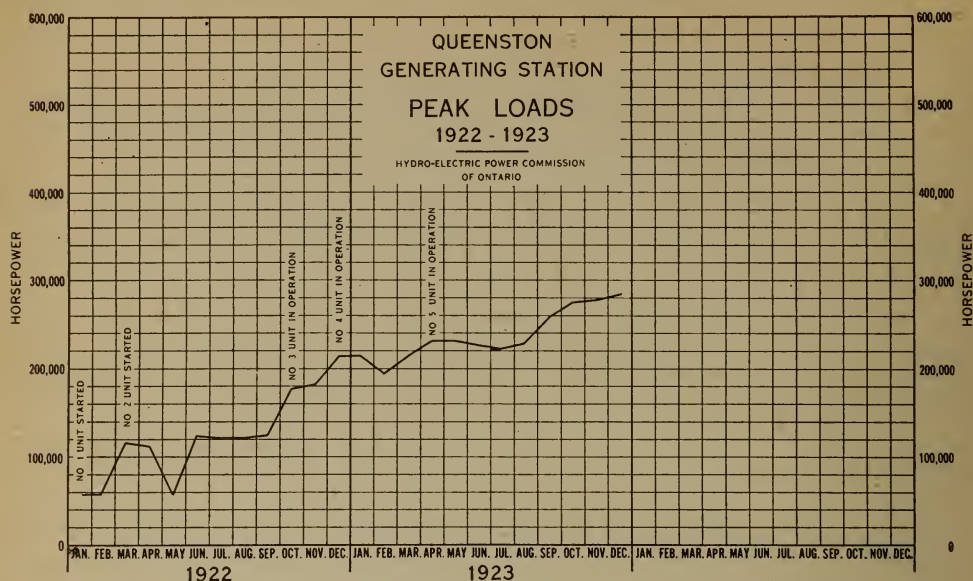
All water-circulating pumps on the system were overhauled. Inspection and maintenance was carried out on all station auxiliary equipment, including motor-generator sets, air compressors, oil pumps and filters.

## QUEENSTON GENERATING STATION

Putting into operation units Nos. 4 and 5, of 60,000 horsepower each, constituted the most notable change in connection with the operation of the Queenston plant. This has been referred to in the previous section. In order to transmit the increased amount of power, additional transmission lines were constructed and brought into the plant. During the previous year the output of the three generators had to be transmitted over two lines only, and the full output of the plant could not be obtained without operating more generators in parallel than was considered advisable, due to the immense short circuit capacity involved. Since the completion of the five transmission lines it is possible to deliver the full output of the five generators to the 110,000-volt lines of the Niagara system.

The usual routine work necessary to maintain a plant in efficient operating condition has been carried out, and a trained operating and maintenance staff built up to take care of the large amount of equipment now in service. Guide bearings on units Nos. 1 and 2 were removed, relined and returned to service.

We are glad to be able to report that there were no fatal or serious accidents to employees of the Operating department at this station during the past year.



**NIAGARA SYSTEM—LOADS OF MUNICIPALITIES, 1921-1922-1923**

Municipality	Peak load in horsepower			Change in load, 1922-1923	
	Oct., 1921	Oct., 1922	Oct., 1923	Decrease	Increase
Acton.....	229.2	261.3	352.5	.....	91.2
Ailsa Craig.....	134.0	112.6	126.0	.....	13.4
Alvinston.....	.....	83.3	85.7	.....	2.4
Aylmer.....	194.3	217.7	253.3	.....	35.6
Ayr.....	71.0	84.4	91.0	.....	6.6
Baden.....	167.5	155.5	250.6	.....	95.1
Beachville.....	221.0	268.0	353.8	.....	85.8
Blenheim.....	156.8	202.4	174.0	28.4	.....
Bolton.....	132.7	122.7	134.9	.....	12.2
Bothwell.....	116.3	124.0	126.8	.....	4.6
Brampton.....	969.0	1,072.3	1,249.3	.....	177.0
Brantford.....	4,866.0	5,811.0	7,292.0	.....	1,481.0
Brigden.....	111.2	35.5	42.3	.....	6.8
Burford.....	53.6	58.7	68.6	.....	9.9
Burgessville.....	43.8	32.0	37.5	.....	5.5
Caledonia.....	106.4	118.0	147.6	.....	29.6
Chatham.....	2,240.0	3,056.3	3,053.6	2.7	.....
Chippawa Village.....	98.0	79.0	109.9	.....	30.9
Clinton.....	170.2	186.3	265.4	.....	79.1
Comber.....	102.4	99.0	102.9	.....	3.9
Dashwood.....	50.2	43.7	51.2	.....	7.5
Delaware.....	16.0	16.6	13.4	3.2	.....
Dereham Township.....	59.2	62.4	69.4	.....	7.0
Dixie.....	80.4	100.8	131.3	.....	30.5
Dorchester.....	30.5	21.4	24.2	.....	2.8
Drayton.....	59.7	56.3	67.0	.....	10.7
Dresden.....	196.3	177.0	202.4	.....	25.4
Drumbo.....	20.3	35.1	30.8	4.3	.....
Dublin.....	45.3	30.2	30.3	.....	0.1
Dundas.....	921.0	1,024.0	1,159.5	.....	135.5
Dunnville.....	282.8	348.5	363.2	.....	14.7
Dutton.....	111.2	115.2	130.6	.....	15.4

## NIAGARA SYSTEM—LOADS OF MUNICIPALITIES, 1921-1922-1923—Continued

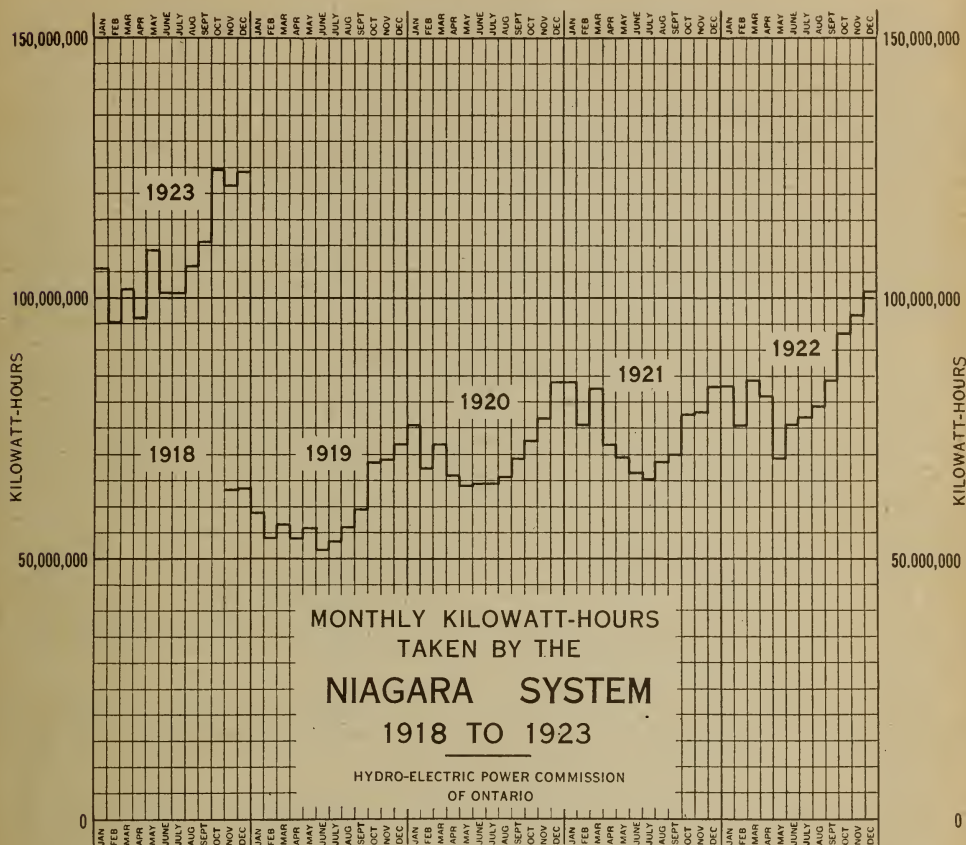
Municipality	Peak load in horsepower			Change in load, 1922-1923	
	Oct., 1921	Oct., 1922	Oct., 1923	Decrease	Increase
Elmira.....	240.0	415.5	425.0	.....	9.5
Elora.....	202.6	272.0	250.6	21.4	.....
Embro.....	60.3	63.5	60.0	3.5	.....
Essex County system.....	1,213.0	1,273.4	1,433.6	.....	160.2
Etobicoke Township.....	431.6	663.5	857.8	.....	194.3
Exeter.....	186.3	232.0	261.0	.....	29.0
Fergus.....	245.3	295.0	309.6	.....	14.6
Ford City.....	.....	977.6	1,407.5	.....	429.9
Forest.....	136.7	133.5	125.4	8.1	.....
Galt.....	3,485.2	4,222.5	4,906.0	.....	683.5
Georgetown.....	496.0	536.0	682.3	.....	146.3
Glencoe.....	74.5	79.8	82.5	.....	2.7
Goderich.....	439.6	510.7	654.1	.....	143.4
Grantham Township.....	35.9	46.3	103.2	.....	56.9
Granton.....	64.0	42.8	42.8	.....	.....
Guelph.....	4,249.3	4,689.0	5,328.4	.....	639.4
Hagersville.....	431.6	536.0	689.5	.....	153.5
Hamilton.....	16,837.4	21,542.0	23,447.0	.....	1,905.0
Harriston.....	193.0	171.5	196.5	.....	25.0
Hensall.....	49.3	60.7	56.7	4.0	.....
Hespeler.....	453.0	509.3	630.0	.....	120.7
Highgate.....	85.8	73.4	80.4	.....	7.0
Humberstone.....	56.0	55.0	76.0	.....	21.0
Ingersoll.....	911.5	1,323.0	1,457.0	.....	134.0
Kitchener.....	7,171.6	7,868.6	10,301.6	.....	2,433.0
Lambeth.....	26.2	42.9	50.5	.....	7.6
Listowel.....	482.5	394.0	429.0	.....	3.5
London.....	12,392.7	16,442.0	18,114.6	.....	1,672.6
Lucan.....	185.0	116.6	122.0	.....	5.4
Lynden.....	76.4	83.0	117.9	.....	34.9
Markham.....	61.0	83.6	114.4	.....	30.8
Merritton.....	217.0	273.4	375.3	.....	101.9
Milton.....	737.2	923.5	985.0	.....	61.5
Milverton.....	207.7	340.4	426.2	.....	85.8
Mimico.....	551.0	812.3	981.2	.....	168.9
Mimico Asylum.....	37.5	37.5	37.5	.....	.....
Mitchell.....	195.7	241.2	256.0	.....	14.8
Moorefield.....	49.6	47.5	34.2	13.3	.....
Montrose.....	6,434.3	2,237.0	2,509.3	.....	272.3
Mount Brydges.....	30.5	30.1	28.8	1.3	.....
Newbury.....	22.7	21.4	33.5	.....	12.1
New Hamburg.....	248.0	227.4	360.5	.....	83.1
New Toronto.....	1,356.5	1,863.3	1,984.0	.....	120.7
Niagara Falls.....	3,706.4	4,646.0	5,565.6	.....	919.6
Niagara-on-the-Lake.....	197.0	205.4	215.8	.....	10.4
Norwich.....	277.4	360.5	337.8	22.7	.....
Oil Springs.....	171.5	223.8	214.4	9.4	.....
Ontario Agricultural College.....	.....	221.0	248.0	.....	27.0
Ontario Central Reformatory.....	.....	191.0	209.1	.....	18.1
Otterville.....	39.4	44.2	49.5	.....	5.3
Palmerston.....	227.8	202.4	233.2	.....	30.8
Paris.....	703.7	904.8	1,008.0	.....	103.2
Parkhill.....	57.6	65.2	85.7	.....	20.5



## NIAGARA SYSTEM—LOADS OF MUNICIPALITIES, 1921-1922-1923—Continued

Municipality	Peak load in horsepower			Change in load, 1922-1923	
	Oct., 1921	Oct., 1922	Oct., 1923	Decrease	Increase
Petersburg, St. Agatha.....	26.8	25.2	32.1	.....	6.9
Petrolia.....	449.0	536.0	768.0	.....	232.0
Plattsville.....	32.0	28.1	36.2	.....	8.1
Port Colborne.....	332.0	398.0	469.0	.....	71.0
Port Credit.....	138.0	186.3	207.7	.....	21.4
Port Dalhousie.....	143.4	152.8	182.3	.....	29.5
Port Dover.....	.....	73.7	114.0	.....	40.3
Port Robinson.....	314.0	314.0	299.0	15.0	.....
Port Stanley.....	193.0	144.7	147.4	.....	2.7
Preston.....	1,599.2	2,024.0	2,193.0	.....	169.0
Princeton.....	17.9	24.0	28.1	.....	4.1
Queenston.....	25.4	37.5	53.6	.....	16.1
Ridgetown.....	201.0	249.8	249.3	0.5	.....
Riverside.....	.....	163.5	281.5	.....	118.0
Rockwood.....	42.8	50.4	51.4	.....	1.0
Rodney.....	103.2	110.2	67.9	42.4	.....
St. Catharines.....	3,720.0	5,120.0	6,079.0	.....	959.0
St. Clair Beach.....	.....	23.8	49.6	.....	25.8
St. George.....	86.4	60.3	82.4	.....	22.1
St. Jacobs.....	75.0	32.0	42.8	.....	10.8
St. Thomas.....	2,658.0	3,025.4	3,748.0	.....	722.6
St. Marys.....	918.2	744.0	835.1	.....	91.1
Sarnia.....	3,022.7	3,526.0	4,278.8	.....	752.8
Seaforth.....	242.6	308.3	384.7	.....	76.4
Simcoe.....	336.4	403.3	542.8	.....	112.5
Springfield.....	16.0	24.7	26.8	.....	2.1
Stamford Township.....	465.0	761.3	748.0	13.3	.....
Stratford.....	2,372.6	3,760.0	4,825.7	.....	1,065.7
Strathroy.....	378.0	454.0	512.0	.....	58.0
Streetsville.....	246.6	329.7	563.0	.....	233.0
Tavistock.....	262.7	127.3	183.6	.....	56.3
Tecumseh.....	.....	80.0	95.0	.....	15.0
Thamesford.....	105.2	87.0	114.0	.....	27.0
Thamesville.....	83.0	79.0	85.7	.....	6.7
Theftford.....	.....	42.6	41.8	0.8	.....
Thorndale.....	107.7	66.8	45.5	21.3	.....
Tilbury.....	148.7	203.7	186.3	17.4	.....
Tillsonburg.....	325.7	368.3	504.6	.....	136.3
Toronto.....	68,573.7	87,600.5	109,411.5	.....	21,811.0
Toronto Township.....	284.7	405.0	524.0	.....	119.0
Walkerville.....	3,311.0	4,705.0	4,246.6	458.4	.....
Wallaceburg.....	486.5	864.6	765.9	98.7	.....
Wardsville.....	10.0	12.8	13.6	.....	0.8
Waterdown.....	110.8	112.0	164.8	.....	52.8
Waterford.....	143.4	187.6	182.3	5.3	.....
Waterloo.....	1,327.0	1,525.4	1,843.0	.....	317.6
Watford.....	67.9	96.0	85.7	10.3	.....
Welland.....	1,359.0	1,675.7	1,863.2	.....	187.5
Wellesley.....	124.6	127.3	142.0	.....	14.7
West Lorne.....	166.2	193.4	222.5	.....	28.2
Weston.....	899.4	1,402.0	1,785.4	.....	383.4
Windsor.....	6,266.7	9,001.3	13,652.5	.....	4,651.2
Woodbridge.....	182.3	165.0	214.4	.....	49.4
Woodstock.....	1,988.0	2,260.0	2,924.2	.....	664.2
Wyoming.....	40.2	39.4	42.8	.....	3.4
Zurich.....	77.8	84.3	72.3	12.0	.....





### NIAGARA SYSTEM—NEW MUNICIPALITIES

Municipality	Date connected	Load in horsepower		Increase in horsepower
		Initial	Oct., 1923	
Belle River.....	Dec. 5, 1922	60.3	53.6	.....
Merlin.....	Dec. 21, 1922	93.8	88.4	.....
Stouffville.....	Sept. 28, 1923	79.7	79.7	.....
Sutton.....	Aug. 25, 1923	53.6	53.6	.....

## ONTARIO POWER COMPANY OF NIAGARA FALLS

The most important work in progress at the Ontario Power Company plant during the last year was the reconstruction of No. 15 unit, which had been totally destroyed in April, 1922. The generator was replaced by the Canadian General Electric Company, using such parts of No. 16 generator as were not damaged or for other reasons considered unsatisfactory for use in the new machine. The bedplate was moved complete from No. 16 position to No. 15, and secured in position by the Operating department. The turbine was entirely reconstructed. The gallery turbine case was badly wrecked at the time of the accident in 1922, and required the replacement of the top half complete. In this case the top half of No. 16 turbine was used. The transfer was made without the necessity of any machine work. The runners installed were new, having been formerly held as spares. All bearings were rebabbitted and any worn bushings in the gate operating mechanism were replaced. The governor was rebuilt with important changes in design and a rearrangement of the governor pressure system was proceeded with. This work was all nearing completion at the end of the current financial year, and it was expected that the unit would be available for the winter peak.

The reconstruction of the governor pressure system for Nos. 1, 2, and 3 turbines was completed and the new system placed in service. In making the extensive changes in piping necessary for the completion of this job, most of the equipment abandoned at No. 16 unit was used.

The remainder of the old winding in No. 5 generator was replaced, so that this unit, as well as generators No. 4 and No. 7, has been completely rewound since the Commission took over the plant.

The usual repairs to the auxiliary electrical equipment were carried out. Among other important jobs the commutators on three exciters were replaced.

To comply with long standing agreements with the Queen Victoria Niagara Falls Park Commission the overhead telephone and power line to the forebay was dismantled and replaced by underground cables. The power cable was run back to the Toronto Power Company plant for a source of power since this was much closer than the Ontario Power Company distributing station, and enabled a large saving to be made in the cost of these changes.

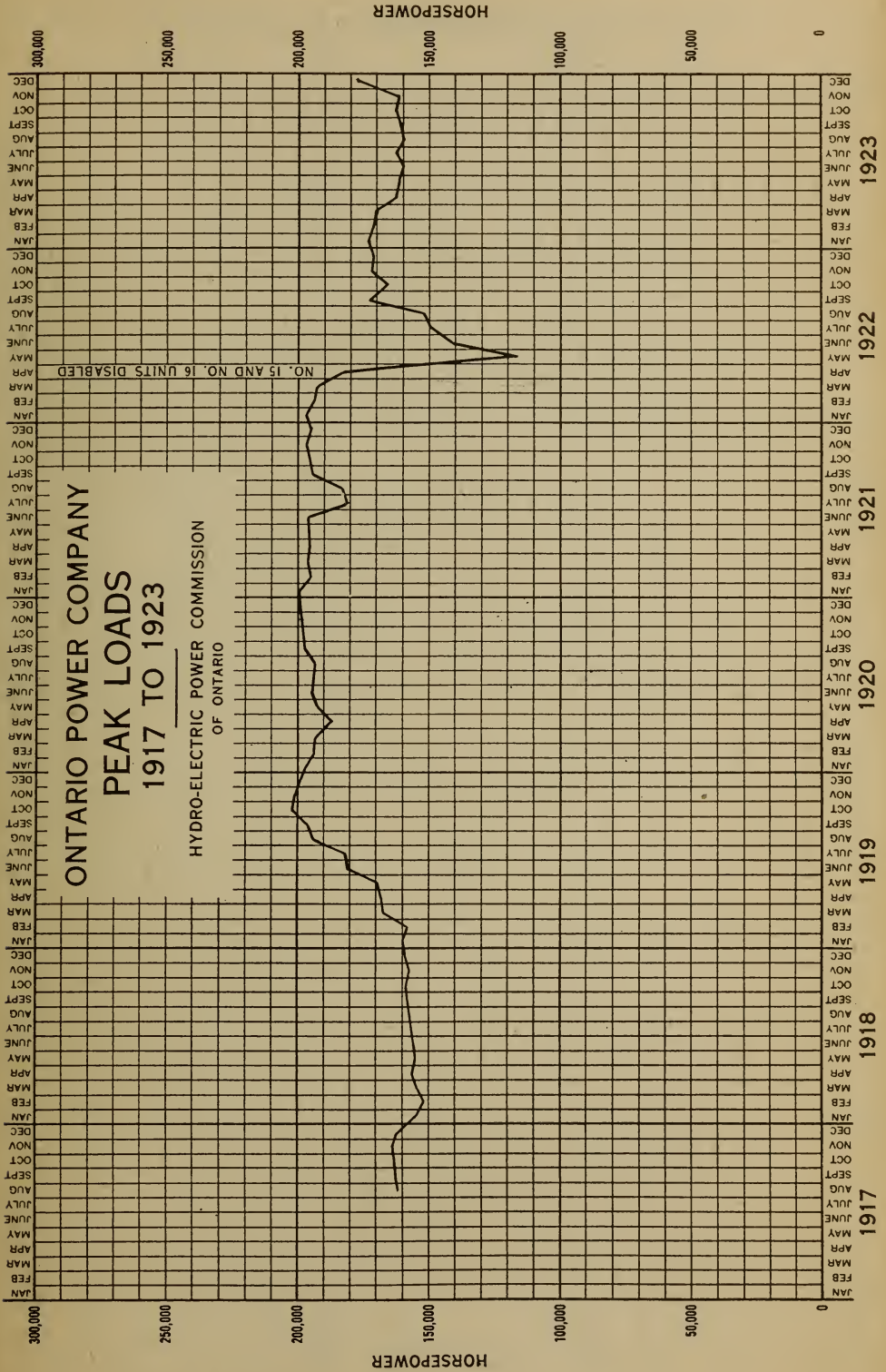
An automatic telephone system has been installed between all parts of the Ontario Power Company and the Toronto Power Company plants. This system will be extended to Queenston generating station in the near future.

The lighting in the gate and screen houses at the forebay was changed from 220 volts to 110 volts, thus making possible the use of standard lamps at lower cost for replacements, and at the same time improving the lighting by use of modern high-efficiency lamps.

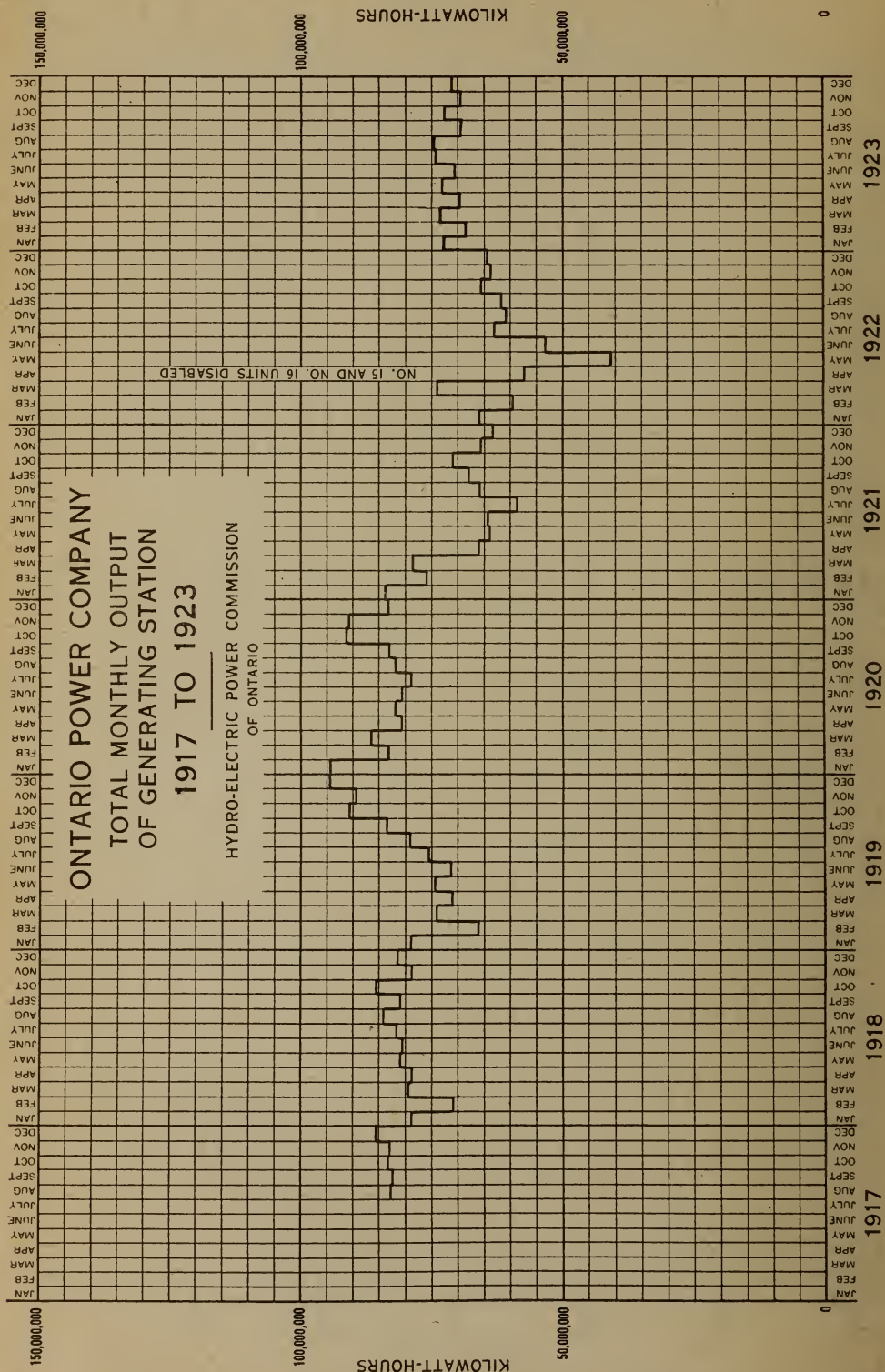
Important rearrangements of the station busses were made to accommodate the changed load conditions resulting from the interconnection with Queenston station.

The installation of three 50-kv-a. transformers at Port Colborne substation to take care of the growth of the Port Colborne municipal load was the only noteworthy change at any of the substations. This work was carried out in a temporary fashion since the entire Port Colborne station will have to be relocated in the spring of 1924, the station site being in the path of the new Welland Canal.

There were no serious accidents to any of the employees during the past year.









## TORONTO POWER COMPANY SYSTEM

During the past year work has been carried on actively in the generating plant at the Falls, bringing up the standard of maintenance to that of the Commission's other plants.

The arc-lighting system throughout the plant, which had become obsolete, was replaced by high-efficiency incandescent lamps of suitable type with a marked improvement in the station lighting, as well as making a material saving in the cost of maintaining the lights, which formerly had to be trimmed daily.

Nos. 9 and 11 generators were partially rewound, following breakdowns on load. Differential relays were installed in these units so that trouble may be more quickly controlled in future, and similar relay equipment is being made up for all the other machines.

New reactance coils were installed for No. 7 generator, the original coils having been destroyed by a short circuit before the Commission took over the operation of the plant.

The runners in No. 8 turbine were replaced by spares, the old runners being badly eroded. The upper distributor in this turbine was also replaced and the unit in general thoroughly overhauled. The damaged parts will be repaired by the electric-welding process after which they will be available as spares for future replacements.

A new valve was installed in the auxiliary penstock intake to replace a flap valve which was wrecked by ice. The new valve has been designed to overcome the difficulties arising from the exposed location of the old valve and is positive and reliable in operation.

All of the permanent buildings were painted outside and as much painting inside was completed as was possible. The standpipe at the transforming station was painted outside and will be cleaned and painted inside during the coming year.

The railway sidings at the generating and transforming stations were rebuilt and the approval of the Queen Victoria Niagara Falls Park Commission obtained for the permanent location of the generating station siding in the park. The trolley poles on this siding were replaced by ornamental steel poles.

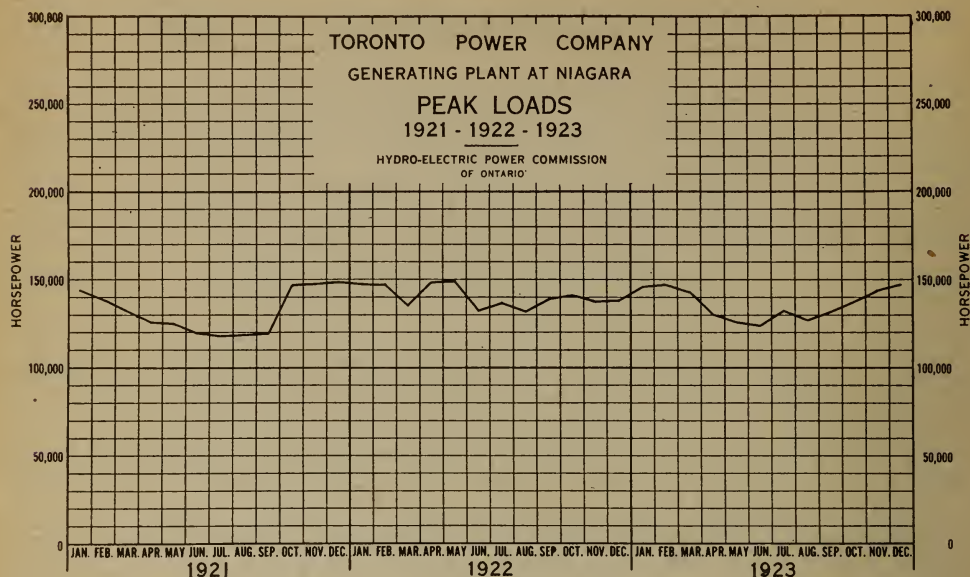
The failure of No. 3 transformer in No. 4 60,000-volt bank at the transformer station made it necessary to completely rebuild and reinsulate this transformer.

A standby water service was installed between the Canadian Niagara Power Company's water system and the Toronto Power Company's pipes so that in case of failure of either company's source of supply, the facilities of the other company would be available. Each company owns the connection on its own property, but the pipe under the Michigan Central Railway track was installed by and is the property of the Toronto Power Company.

The ordinary current repairs and inspection of all operating equipment were made as usual. This work, while absolutely essential, covers such a vast amount of detail that it is impossible to do more than refer to it in passing.

There were no serious accidents to employees at this plant during the past year.

The operation of the Toronto Power Company transmission lines from Niagara to Toronto has been attended with success, very few interruptions to service having taken place during the year. The lines were constantly



patrolled and the usual maintenance work carried out to insure reliable and continuous transmission of power. As the transmission line runs direct from the generating station at Niagara to the transformer station at Toronto, with no branches or intervening stations, the operation of these lines is comparatively simple, and there were no alterations or work of a special nature to report.

The installation of the radio telephone sets mentioned in last year's Annual Report has been completed. There are now wireless transmitting and receiving sets at the Davenport station at Toronto and the Electrical Development Company plant at Niagara, with similar sets at Port Credit, Burlington and Twenty-Mile Creek, these being switching stations on the line between Niagara and Toronto. By the use of these sets it is possible to transmit messages and operating instructions between Toronto and Niagara Falls or the switching stations mentioned. These sets are provided and held as a standby for emergency communication, in case of trouble with the regular telephone lines.

At the terminal station on Davenport road, Toronto, the usual routine work has been carried out to maintain the equipment in good condition, but there have been no important alterations in equipment or changes in operating conditions.

The steam plant at the foot of Scott street, Toronto, has been kept available as a standby for emergencies, in connection with the Toronto Power Company system or the Niagara system. Steam is generated throughout the year for the heating of the new Union Railway station under contract, the steam being transmitted to the station through underground pipes. Owing to the number of lines now in service between Niagara and Toronto, with the resulting extreme rarity of interruptions to the supply, the steam plant has not been called into service to carry load except for a few days in February, at which time severe weather and ice trouble at Niagara reduced the amount of power available. At this time the plant carried over 10,000 horsepower at peak, relieving the situation to that extent, although the total power output for the year was only 59,140 kilowatt-hours.

## COMBINED NORTHERN SYSTEMS

The chief problem in the operation of the Eugenia, Severn and Wasdells systems, during the past year, has been to meet the demand for power. It has been necessary to keep all generating equipment constantly ready for service and yet to carry out any necessary repairs and maintenance work so that the plants would be kept in efficient condition and able to supply the maximum amount of power with the equipment and water available.

The necessity of working near live wires in order to maintain continuous service, when all equipment is required to meet the demand, calls for great care in the performance of the work, as well as for a thorough knowledge of the plant and its apparatus. Therefore it is impossible to employ inexperienced men temporarily to assist on such work, and the operating and maintenance men on the regular staff are obliged to work under increasing difficulties. In spite of such difficulties, however, all apparatus and lines have been maintained during the past year in efficient condition and with very few interruptions to service.

During the year the demand for power has equalled or exceeded the high loads of last year. The average load shows a growth of 14 per cent over the preceding year, and the maximum demand of the Eugenia, Severn and Wasdells system municipalities has been greater than the generating capacity of the power houses on their respective systems. Due to the interconnection of the Wasdells, Severn and Eugenia systems, and to the purchase of power from the plant of the Orillia Commission, it has been possible to transfer power when not required on one system to meet the heavier demand on another, so that it has not been necessary to curtail the supply as would have been the case had the systems been kept separate or had all the municipalities made their heaviest demands at the same time.

The demand for power during the winter months of 1922-23 was the heaviest in the history of the systems. This load taxed to the limit the available generating capacity of the Commission's plants, and also required all power available for purchase. The surplus power of the Orillia Water, Light and Power Commission was purchased, and arrangements were made with the Wingham Utilities Commission for the operation of its hydro-electric plant in parallel with the Eugenia system. The heavy load required the maintenance of a good flow in the Severn river, which comes under the regulation of the Department of Railways and Canals. The officials of the Department in charge of this section of the canal did everything possible to co-operate with the Commission and avert a power shortage, and maintained as high a flow in the river as was possible under the circumstances. The flow required to meet the heavy load, combined with the lack of fall rain, and with a cold winter during which no thaws occurred, drew down the level of lakes Couchiching and Simcoe considerably below normal. The Commission also was obliged, in order to meet the demands, to lower the level of the storage basin at the Eugenia plant to the lowest point on record. By these means it was possible to get through the winter months without curtailing the supply of power to any municipality, until the spring thaws relieved the situation. When the spring freshet occurred, it was easily possible to restore the levels on lakes Simcoe and Couchiching and to fill up the Eugenia storage basin.

During the latter part of this summer, the demand for power on the northern systems has again pressed closely on the capacity available. Apart from the



limit on power output, imposed by the capacity of the generating equipment installed in the three plants, a further limit was placed by shortage of stream flow. The precipitation was much below normal during the summer months from July to October, with the natural result that the levels fell in the tributary lakes and the flow in the rivers dwindled. The engineers of the Department of Railways and Canals again co-operated with the Commission, and increased the flow in the Severn river by drawing upon storage in lakes Couchiching and Simcoe, so that at the end of the summer months these were again somewhat below normal. Engineers from the Commission, with the engineer of the Orillia Commission, and the divisional engineer for the Trent Valley Canal, explored the storage of tributary lakes, and arrangements were made whereby some additional water up the Black river, controlled by a lumber company's dam, was released, augmenting the flow in the Severn river by that amount.

Surplus power of the Orillia Water, Light and Power Commission was purchased in order to utilize all the water passing its plant at the Swift rapids, and the Commission's own plant at Wasdells Falls was operated to the full amount permitted by the stream flow, any surplus over the requirements of the Wasdells system being fed to the Severn and Eugenia system to conserve water there.

Foreseeing the possibility of a shortage in the power supply on the northern systems, the Commission's engineers had made plans for the extension of a line from Harriston on the Niagara system to Mount Forest on the Eugenia system. Due to the frequency of the current on the Niagara system being 25 cycles and on the Eugenia system 60 cycles, it was necessary to install a frequency changer set to convert the current. A frequency changer set of 1,150-kv-a. capacity, formerly in service at Cooksville high-tension station, was transferred to Mount Forest. This work was pushed forward as rapidly as possible in order to relieve the situation on the Combined Northern systems, and the new station at Mount Forest was put into service during the first week of October. This frequency changer set has been delivering approximately 1,000 horsepower from the Niagara system to the northern systems, thus aiding the generating plants at Eugenia, Big Chute, and Wasdells falls to meet the demand for power, and being operated near full capacity at all times, even during off-peak hours when the generating stations could carry the load without assistance, it has enabled them to conserve water for use at times when needed.

Thanks to the various measures taken, it has not been necessary to curtail the supply of power to any of the municipalities on the Combined Northern systems. Mild autumn weather with rain has relieved the situation in regard to the water supply so that at the time of writing this report there does not appear to be any imminent danger of a shortage of power during the coming winter.

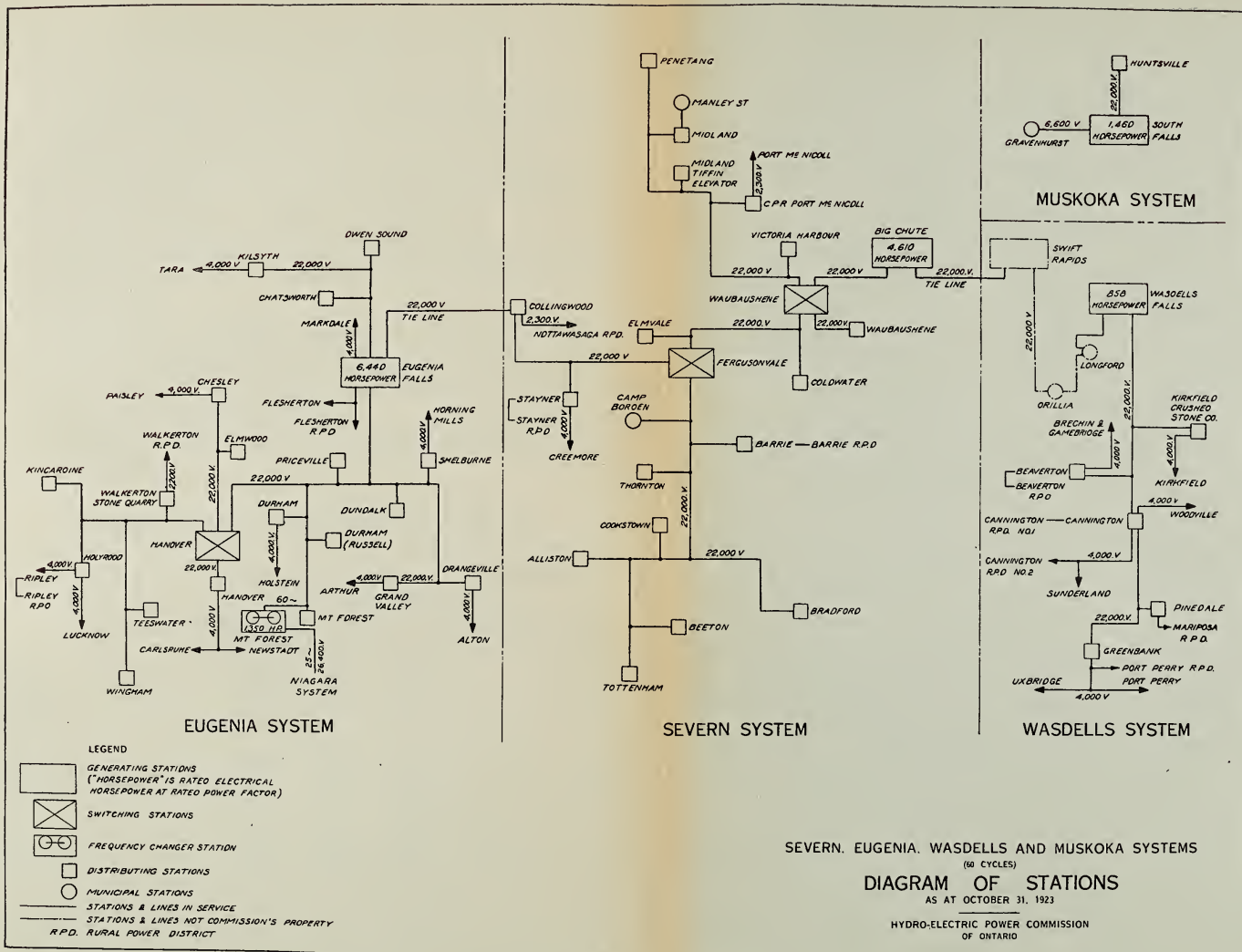
Aside from the problem of meeting the increased demand for power with the plant and water available, the year's operation has been uneventful and on the whole very satisfactory.

## SEVERN SYSTEM

There were no marked changes in operating conditions on the Severn system during the past year, the usual routine repairs being carried out to keep stations and lines in good condition.

The No. 2 circuit between Waubaushene and Big Chute was rebuilt by the Operating Department staff during the summer months, due to the excessive







insulator-pin and cross-arm troubles which had been experienced. These parts had served their useful life and were removed from service and replaced by new material. At the same time certain changes were made with a view to strengthening the line and reducing the maintenance cost.

On the older sections of the high-tension line, the insulators and pins were inspected, and all defective insulators and pins discovered were replaced.

Insulators of an obsolete design on some of the horn-gap, air-break switches were all replaced by new insulators of improved design, and at the same time the switches were overhauled in a general way.

The marine railway feeder out of the Big Chute plant was changed from 550 volts to 2,200 volts, to accommodate certain extensions to the marine railway made by the Department of Railways and Canals.

The transformer capacity at Penetang was increased by removing the three 200-kw., indoor-type transformers, and installing three 300-kv-a., outdoor-type transformers. This required certain changes in the low-tension and high-tension bus structures.

In August initial service was given to the Stayner rural power district, feeding Wassaga Beach. This district is supplied from the Stayner distributing system through a metering station located at Stayner.

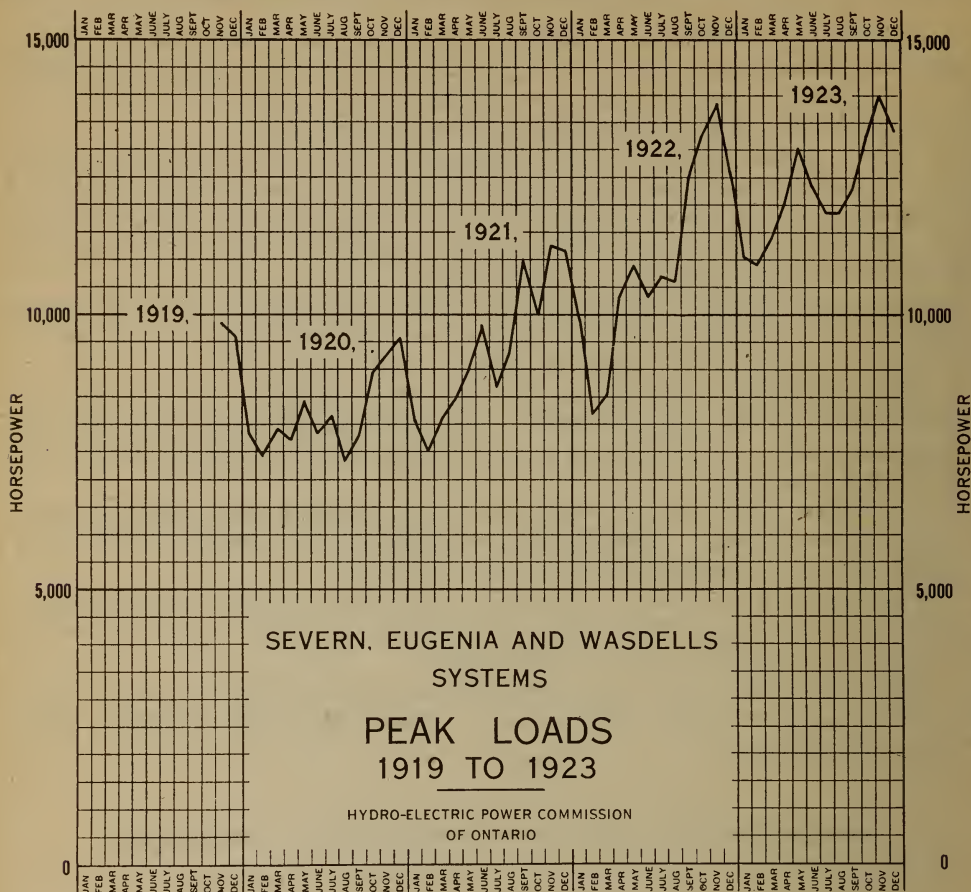
Initial service was given to the Barrie rural power district, feeding Shanty Bay district, on August 23. This district is fed through a metering station at Barrie from the Barrie distributing system.

The transformer capacity of the Coldwater station was increased in July by removing from service three 25-kv-a. transformers, and installing three 40-kv-a. transformers.

#### SEVERN SYSTEM—LOADS OF MUNICIPALITIES, 1921-1922-1923

Municipality	Peak load in horsepower			Change in load, 1922-1923	
	Oct., 1921	Oct., 1922	Oct., 1923	Decrease	Increase
Alliston.....	143.0	119.0	135.0	.....	16.0
Barrie.....	828.4	1,057.6	1,315.6	.....	258.0
Beeton.....	86.4	89.6	97.8	.....	8.2
Bradford.....	69.4	70.6	87.6	.....	17.0
Camp Borden.....	234.5	234.5	214.4	20.1	.....
Coldwater.....	56.3	108.5	84.4	24.1	.....
Collingwood.....	811.0	1,161.0	1,239.2	.....	78.2
Cookstown.....	75.0	36.0	39.9	.....	3.9
Creemore.....	45.8	56.3	57.6	.....	1.3
Elmvale.....	124.6	136.7	143.0	.....	6.3
Midland.....	1,108.5	1,583.0	1,605.9	.....	22.9
Penetang.....	504.0	811.0	471.8	339.2	.....
Port McNicoll.....	44.7	49.5	57.6	.....	8.1
Stayne.....	120.6	112.6	108.5	4.1	.....
Thornton.....	14.3	14.0	16.3	.....	2.3
Tottenham.....	38.2	35.3	40.8*	.....	5.3
Victoria Harbor.....	46.0	47.0	52.0	.....	5.0
Waubashene.....	24.0	26.5	33.5	.....	7.0

\* Estimated.



### EUGENIA SYSTEM

Aside from the problem of meeting the demand for power, which was common on all three of the Combined Northern systems, a new problem in the operation of the Eugenia system was presented when the frequency changer station at Mount Forest was put into operation. Owing to the amount of generating capacity on the Niagara system, the frequency on the 25-cycle end of the frequency changer set was not affected by any changes in load on the northern systems. Therefore the frequency on the 60-cycle or Eugenia side of the frequency changer set was absolutely fixed. Sudden variations in the load on the Eugenia system, and regulation of the load on the frequency changer set, had to be taken care of by adjustments at the Eugenia generating station. This called for some changes in the system of operating the generators and lines at the Eugenia plant, but the difficulties have been largely overcome and good regulation is now being obtained considering the fluctuating type of load thrown on some of the lines. The load on the frequency changer set has been regulated to a high load factor, materially helping to meet power demands on the Eugenia system, and to conserve water in the Eugenia storage basin.

At the Eugenia plant the No. 2 turbine was overhauled and rebuilt to an improved design, the same as was done with No. 1 turbine last year. The change since the turbine has been put back into service has proven very satisfactory, the consumption of water being less for the same power output.



Considerable maintenance work was carried out at this plant on the turbine governors, Johnston hydraulic valves, woodstave pipe line, etc., and the plant generally kept in a condition of high efficiency.

The work of storm-guying and reinforcing the pole structures at railway crossings, which was commenced last year, has been carried through to completion.

Road work on county and provincial highways has interfered to a considerable extent with the Commission's lines, and it has been necessary to keep a line gang busy all summer moving or repairing lines at points affected. In some sections work has been completed, but in other places considerable work yet remains to be done.

In August, 1923, a supply of power was given to Paisley over a 4,000-volt line built from Chesley station.

The distribution system of the village of Eugenia Falls was reconstructed and put in good operating condition. This forms part of the Flesherton rural power district.

#### EUGENIA SYSTEM—LOADS OF MUNICIPALITIES, 1921-1922-1923

Municipality	Peak load in horsepower			Change in load, 1922-1923	
	Oct., 1921	Oct., 1922	Oct., 1923	Decrease	Increase
Arthur.....	121.0	100.5	109.2	.....	8.7
Carlsruhe and Neustadt.....	170.2	167.5	221.1	.....	53.6
Chatsworth.....	24.0	52.8	28.9	23.9	.....
Chesley.....	263.2	268.8	293.0	.....	24.2
Dundalk.....	87.0	109.3	128.6	.....	19.3
Durham.....	512.0	573.7	474.0	99.7	.....
Elmwood.....	45.5	29.6	36.9	.....	7.3
Flesherton.....	47.5	36.2	54.7	.....	18.5
Grand Valley.....	65.0	65.0	70.5	.....	5.5
Hanover.....	1,441.0	1,675.7	1,579.0	96.7	.....
Holstein.....	9.6	8.0	10.4	.....	2.4
Horning's Mills.....	5.0	5.0	5.0	.....	.....
Kincardine.....	114.0	179.6	227.8	.....	48.2
Lucknow.....	85.7	87.0	81.7	5.3	.....
Markdale.....	88.4	92.4	112.6	.....	20.2
Mount Forest.....	156.4	205.8	170.2	35.6	.....
Orangeville.....	167.5	194.6	244.4	.....	49.8
Owen Sound.....	1,402.0	1,691.7	1,731.9	.....	40.2
Priceville.....	10.7	10.4	10.0	0.4	.....
Ripley.....	49.5	77.7	39.6	38.1	.....
Shelburne.....	136.7	147.4	148.7	.....	1.3
Tara.....	53.6	42.8	46.2	.....	3.4
Teeswater.....	102.1	67.6	132.7	.....	65.1
Wingham.....	382.0	297.5	380.7	.....	83.2

#### EUGENIA SYSTEM—NEW MUNICIPALITIES

Municipality	Date connected	Load in horsepower		Increase in horsepower
		Initial	Oct., 1923	
Paisley.....	Aug. 1922	57.0	56.3	.....

## WASDELLS SYSTEM

Extensive maintenance work was carried out at the Wasdells plant during the year to keep equipment in proper repair and increase efficiency. Both turbines were completely overhauled and adjusted. A larger capacity pump and pipe connections were installed for unwatering the turbine pits.

In November, 1922, a new shaft of stronger design, and an improved thrust bearing, were installed in No. 1 generator, which had been operating for some time with a repaired shaft.

The generating plant at Wasdells falls was operated at full capacity throughout the year, a limit on output being imposed by water conditions. There was some increase in the power demands of the municipalities on the Wasdells system which at times required the full output of this plant, but all surplus available was transmitted to the Severn and Eugenia systems to assist in relieving overload conditions there.

At Pinedale an outdoor-type transformer station was placed in service on September 7, supplying power to the Mariposa rural power district.

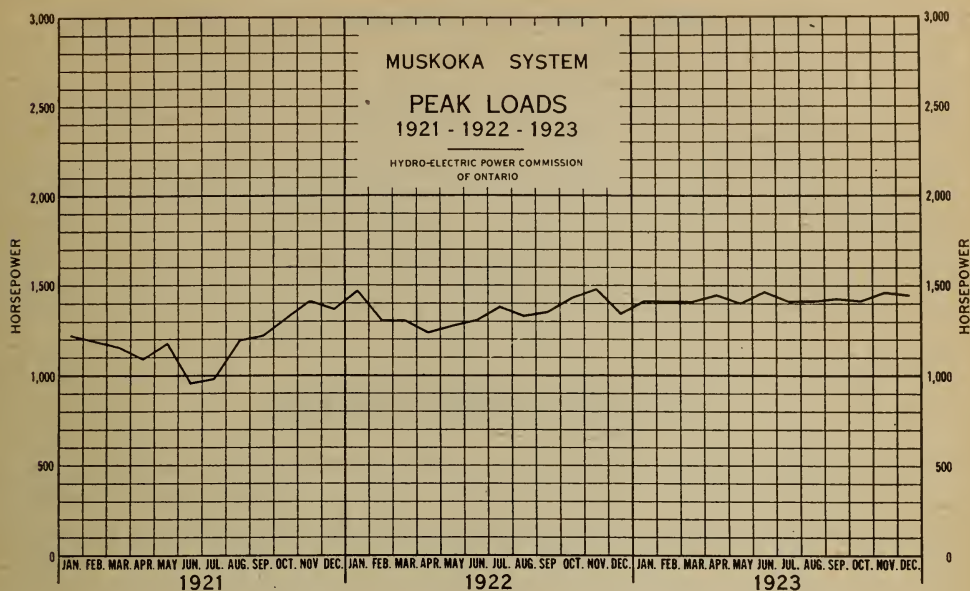
The Victoria Road metering station was placed in service on February 22, to measure power supplied to the Victoria Road Mutual Electric Association over its 4,000-volt line between Kirkfield substation and the hamlet of Victoria Road.

### WASDELLS SYSTEM—LOADS OF MUNICIPALITIES, 1921-1922-1923

Municipality	Peak load in horsepower			Change in load, 1922-1923	
	Oct., 1921	Oct., 1922	Oct., 1923	Decrease	Increase
Beaverton.....	103.2	119.9	132.7	.....	12.8
Brechin.....	58.4	53.6	50.9	2.7	.....
Cannington.....	72.3	92.5	93.8	.....	1.3
Kirkfield.....	17.4	32.7	26.8	5.9	.....
Port Perry.....	.....	80.4	91.0	.....	10.6
Sunderland.....	67.0	60.3	56.3	4.0	.....
Uxbridge.....	.....	88.4	83.0	5.4	.....
Woodville.....	80.4	61.0	57.6	3.4	.....

### WASDELLS SYSTEM—NEW MUNICIPALITIES

Municipality	Date connected	Load in horsepower		Increase in horsepower
		Initial	Oct., 1923	
Victoria Road.....	Feb. 1, 1923	15.0	13.6	....



### MUSKOKA SYSTEM

No marked changes were made in operating conditions on the Muskoka system during the past fiscal year. The usual routine work was carried out on lines and equipment to keep same in proper condition. No extensive repairs or alterations at the generating station are possible as the demand for power equals the total capacity of the plant.

The demand for power on the Muskoka system has continued to increase, and the peak load for the past fiscal year is slightly higher than for the previous year, 1,480 horsepower in November, as compared with 1,464 horsepower, the peak for the previous year. However, as the normal operating capacity of this plant is only 1,400 horsepower, with little margin for overload, it is not possible for much change to occur in the maximum load. By referring to the load curve given in this report, showing the demand each month for the past three years, it will be noted that the plant has been overloaded every month throughout the last year, even the summer months not showing the drop in load that is usual on practically all systems.

From the above figures for load conditions, it will be evident how difficult it was for the operating staff to take any equipment out of service for repairs, but advantage has been taken of short intervals during which the demand for power was low, and such work carried out as was possible with the time available. Equipment has been kept in fair condition, and very few interruptions to service have occurred during the year.

A signal circuit was installed between the gate house and the generating station at South falls with automatic equipment to warn the operators should water in the forebay rise too high, a condition that has to be guarded against at this plant.

The long spans in the 22,000-volt transmission line adjacent to the power house, and two river crossings, were strengthened by the installation of strain equipment on the supporting structures.



MUSKOKA SYSTEM—LOADS OF MUNICIPALITIES, 1921 TO 1923

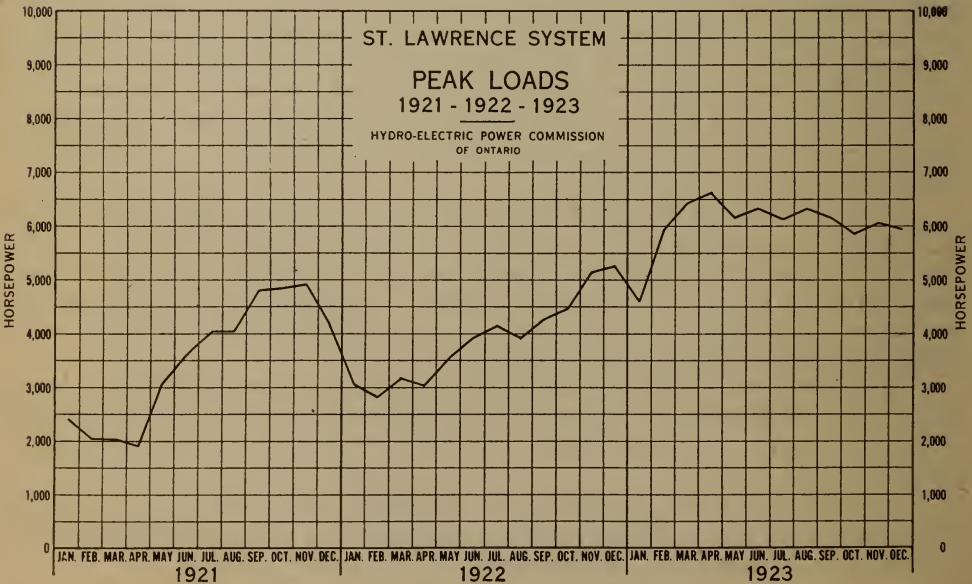
Municipality	Peak load in horsepower			Change in load, 1922-1923	
	Oct., 1921	Oct., 1922	Oct., 1923	Decrease	Increase
Gravenhurst.....	341.8	384.7	544.2	.....	159.5
Huntsville.....	872.6	921.0	896.7	24.3	.....

ST. LAWRENCE SYSTEM

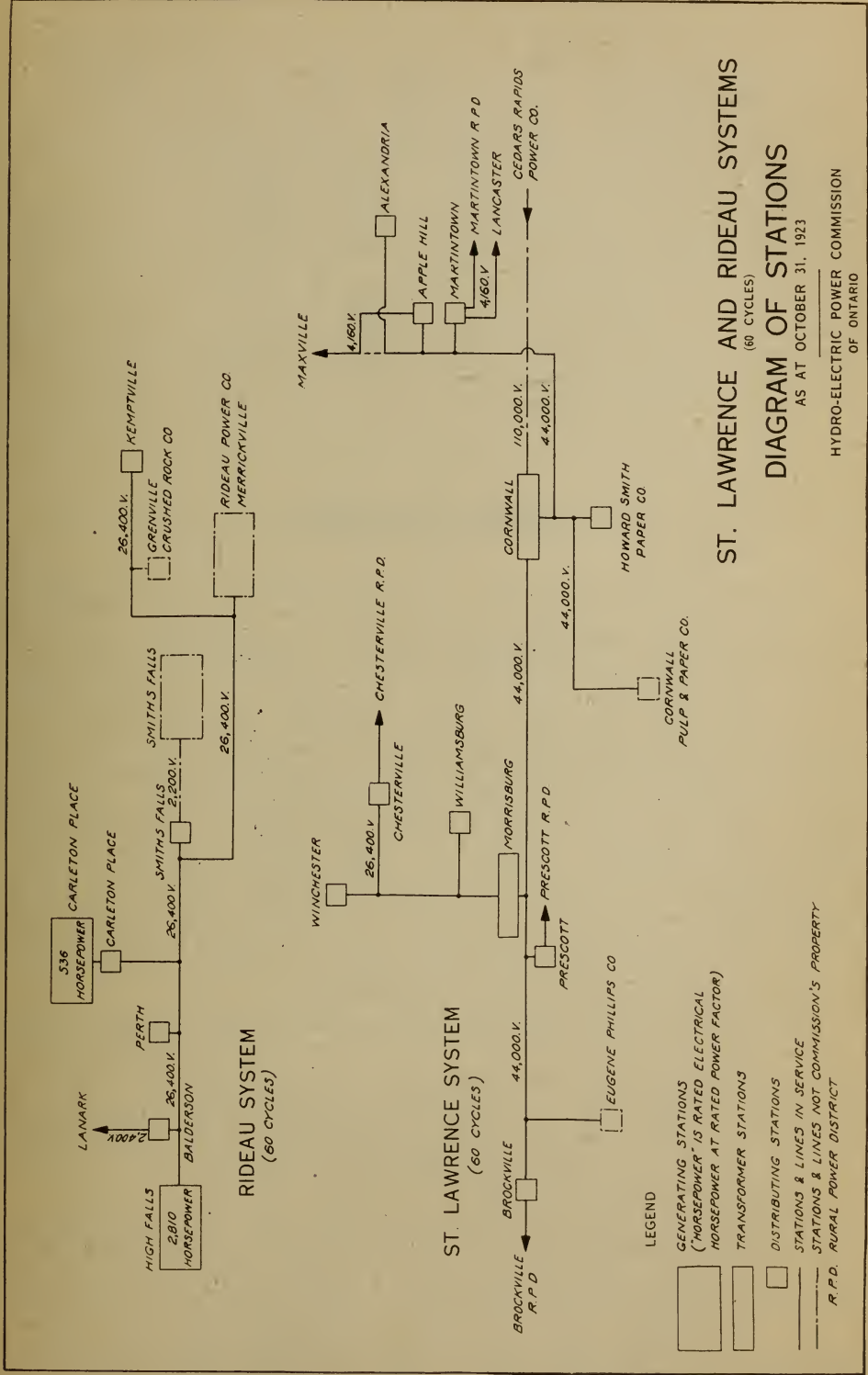
Operating conditions generally on the St. Lawrence system have been satisfactory. No change has occurred in conditions as outlined in previous report, and no incident worthy of mention has occurred. During the latter part of the year the regulation of the voltage and frequency of the power purchased for the system was not up the usual standard, but apparently the causes have been remedied and the Commission has been assured that similar conditions will not occur again.

The operation of the transmission lines at 44,000 volts has been satisfactory, and no trouble has resulted from the fact that the neutral of the Y-connected, 110,000-volt, power transformers at Cornwall could not be solidly grounded.

Extensive pole movements for the Department of Public Highways have been necessary, chiefly between Prescott and Cardinal, between Iroquois and Morrisburg, and in the neighbourhood of Cornwall.







## ST. LAWRENCE SYSTEM—LOADS OF MUNICIPALITIES, 1921-1922-1923

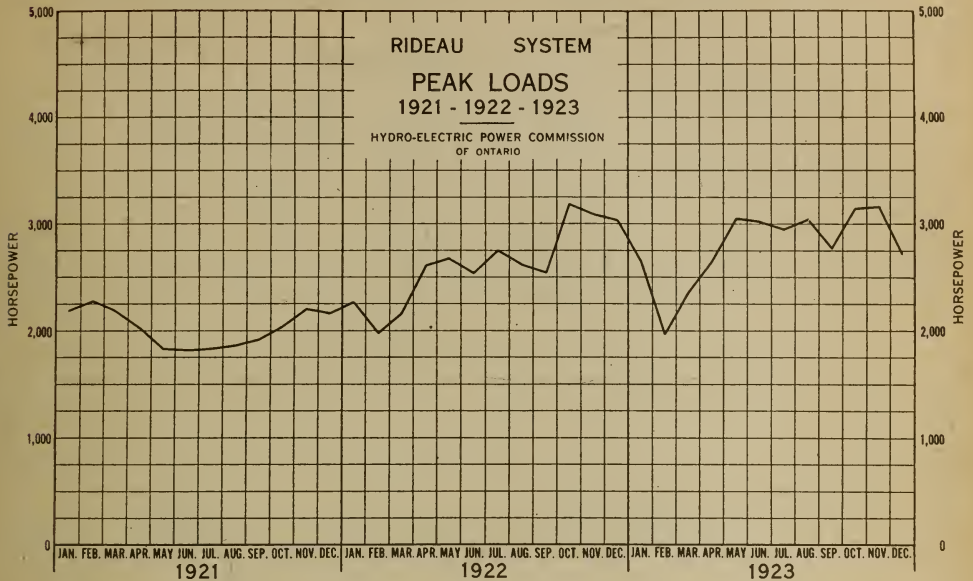
Municipality	Peak load in horsepower			Change in load 1922-1923	
	Oct., 1921	Oct., 1922	Oct., 1923	Decrease	Increase
Alexandria.....	136.2	183.0	187.6	.....	4.6
Apple Hill.....	18.7	24.0	21.4	2.6	.....
Brockville.....	1,038.8	1,233.2	1,277.6	.....	44.4
Chesterville.....	132.0	124.7	170.2	.....	45.5
Lancaster.....	22.7	24.0	26.8	.....	2.8
Martintown.....	11.6	12.4	13.6	.....	1.2
Maxville.....	34.8	34.8	58.9	.....	24.1
Prescott.....	223.8	147.4	264.0	.....	116.6
Williamsburg.....	13.4	18.0	22.0	.....	4.0
Winchester.....	90.4	110.0	102.0	8.0	.....

RIDEAU SYSTEM

The spring of 1923 was a critical one in the operation of the Rideau system. The storage reserve of the Rideau system had suffered somewhat through the loss of the Mazinaw Lake dam, which went out in April, 1922. 1922 was a very bad water year for the Mississippi River watershed, and in spite of the fact that the Carleton Place plant was put into operation in the fall, it became evident early in 1923 that auxiliary power would have to be developed to avoid a shortage. Arrangements were accordingly made with Smith Falls, under which the Commission overhauled the municipal steam plant, and at its own expense operated it during the greater part of February and the early part of March. This critical situation was further aggravated by the failure of the Rideau Power Company to deliver any power whatever for over a month. Although the spring break-up was late, power interruptions were avoided by the operation of the steam plant at Smith Falls, from which approximately 200 kilowatts were obtained continuously, and by requesting the municipalities not only to exercise economy in the use of power, but also to transfer to local steam plants such local load as could be transferred.

As a result of the increasing load on the Rideau system, and the threatened water shortage just mentioned, the Commission has given very serious attention to storage facilities on the Mississippi river, all of which at the present time are owned and operated by the Mississippi River Improvement Company. Negotiations, with a view to making arrangements for the development of additional storage, in a manner which will safeguard the interests of the Commission, have been under way with this Company.

The Company has decided to construct a new concrete dam at Cross lake, which, under the present plans, will require several years to complete. To provide for the water requirements until the spring of 1924, work has already been started on the side dam which forms a part of this work, the sluiceway of which will be much lower than that of the present dam, and when the upstream channel has been deepened by a reasonable amount of excavating, will permit of an additional draft on the lake of five or six feet. This side dam



will be completed before 1924, and if additional water is required, some of the excavating will be done so as to release water for use during January and February, 1924.

The reconstruction of the old dam at Cross lake comes under the scope of the Company's present charter, but the replacement of the dam at Mazinaw lake would require an extension of charter. The Commission and the Company are agreed that this dam should be replaced by a permanent structure which will hold the water in a more efficient manner, and arrangements between the Company and the Commission to permit of the necessary extension of charter are under consideration. In the meantime, the requirements of the approaching winter are fairly well provided for by the construction last spring of a temporary dam at the Mazinaw, which has functioned very well, and which, if necessary, can be reconstructed next year. The Company has also carried out certain excavating work at the narrows between the upper and lower Mazinaw, which will permit an additional storage draft on the upper section of the lake.

To further guard against the possibility of a water shortage, and also to provide additional peak capacity for the system, the old hydraulic equipment in the Carleton Place generating station has been thoroughly overhauled and put into shape satisfactory for continuous operation.

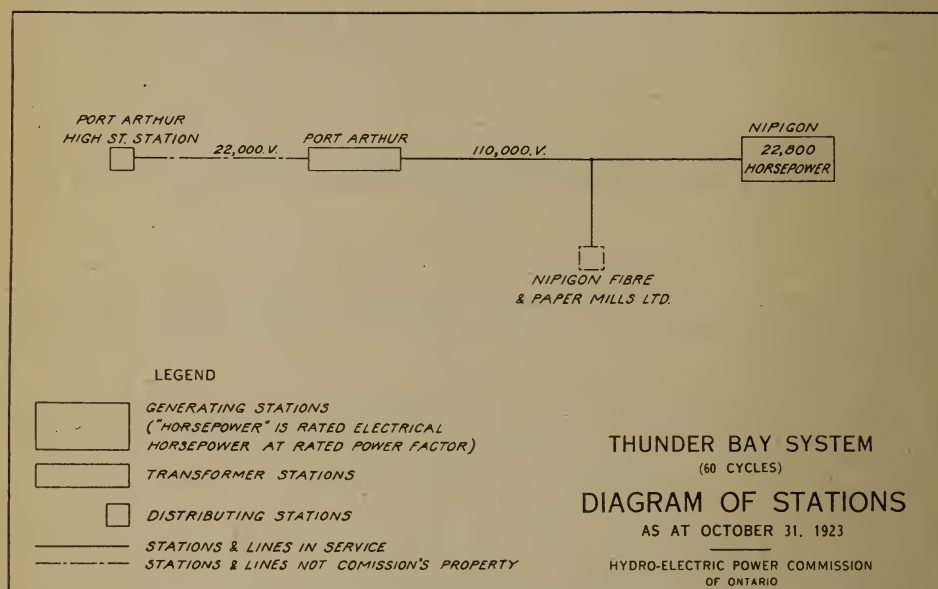
With the increasing system load, frequency and voltage regulation have required attention. The mechanical governor on No. 2 unit at High falls is to be replaced by a thoroughly overhauled Lombard oil-pressure governor from the construction station at Nipigon, and accessory equipment, enabling all the governors in the station to be controlled from the switchboard, has been obtained. All this equipment is now on hand awaiting installation.

On the whole it seems quite safe to state that the system is prepared to meet any demands which may fall upon it during the coming year.



## RIDEAU SYSTEM—LOADS OF MUNICIPALITIES, 1921-1922-1923

Municipality	Peak load in horsepower			Change in-load, 1922-1923	
	Oct., 1921	Oct., 1922	Oct., 1923	Decrease	Increase
Carleton Place.....	769.4	800.2	832.4	.....	32.2
Kemptville.....	.....	128.7	93.8	34.9	.....
Lanark.....	38.8	35.5	33.5	2.0	.....
Perth.....	522.7	474.5	516.0	.....	41.5
Smith Falls.....	713.0	785.5	975.8	.....	190.3

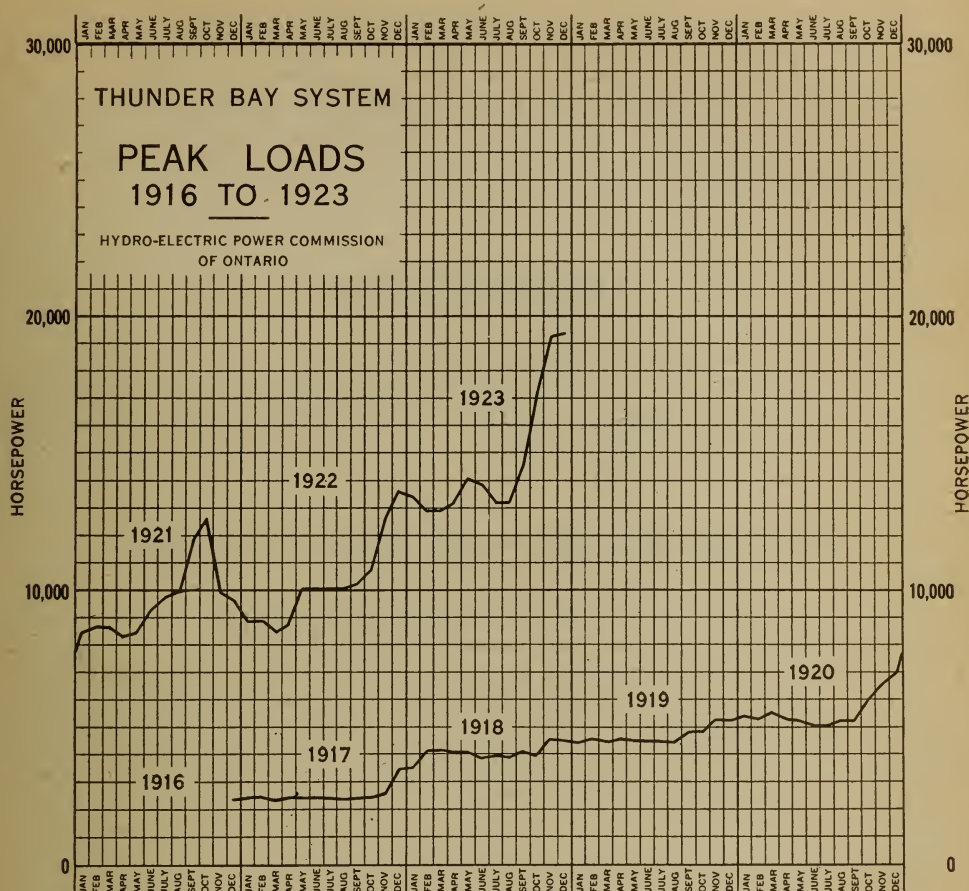


## THUNDER BAY SYSTEM

The Cameron Falls generating station has now completed its third year of operation with a steadily increasing load, but no radical changes in operating conditions have taken place on the Thunder Bay system during the past year.

The regular increase in the load on this system has continued until the load on the plant requires practically full output capacity of both generating units, and the load factor on the system is so high that during the latter part of the fiscal year it has been found difficult to obtain a shut-down on a machine for even a few hours on Sunday for cleaning purposes or minor repairs. The necessity for additional generating equipment in the near future is readily apparent, and there will be load waiting for the machines now in the course of construction.

Beyond some slight troubles with the bushings and operating mechanisms of the high-tension oil-breakers, all equipment at the generating station came



through the year in good condition. These troubles resulted in system interruptions, but it is believed that we are now rid of any parts possessing similar weaknesses. All auxiliary equipment was kept in first-class operating condition.

The transmission line has given excellent service during the past year. Due to the prolonged dry spell early this year, when forest fires were raging in this district, some apprehension was felt that the line might be damaged by fire, but all near-by fires were kept under close supervision and, with the assistance in some cases of railway fire fighters, were kept in control. Only one pole was damaged by fire, and as the damages to it were slight, repairs were readily effected. A considerable amount of brush cutting has been found necessary along this line, to keep the undergrowth from extending into the line.

The receiving station at Bare Point has operated fairly satisfactorily, but has been responsible for a couple of short interruptions to service, due to the failure of a line entrance bushing at one time, and to the failure of a bushing on the high-tension breaker at another time. The low-tension breaker equipment has functioned satisfactorily in relieving the system of feeder trouble. The transformer bank at this station has now been loaded well beyond the manufacturers' original rating for these units, but the temperatures have been held at a reasonable value.

The substation at High and VanNorman streets has had no trouble whatever during the past year. The low-voltage (2,300-volt) load in the city of Port Arthur has increased until it has become necessary to use both transformer banks in this station almost continuously during the winter months.

The increase in load on this system, as shown by the curve given elsewhere in this report, indicates a most remarkable and encouraging growth in the amount of power utilized in this district.

## OTTAWA SYSTEM

During 1923 the Ottawa system has maintained its customary increase in load. From an operating point of view general conditions have been entirely satisfactory. No outstanding incidents of sufficient interest to warrant inclusion in this Report have occurred.

## CENTRAL ONTARIO AND TRENT SYSTEM

While the Central Ontario and Trent system has completed a very satisfactory, even gratifying, year, with respect to load conditions and service, yet it has been marked by very little in the way of outstanding operating incidents.

The new generating station at Ranney falls, which became available during the latter part of August, 1922, and which was reported in the Fifteenth Annual Report, has given excellent and timely service, but the additional power which it produces has been absorbed so rapidly that the generating stations now under construction at Dams 8 and 9 will soon be required to meet the demand for power.

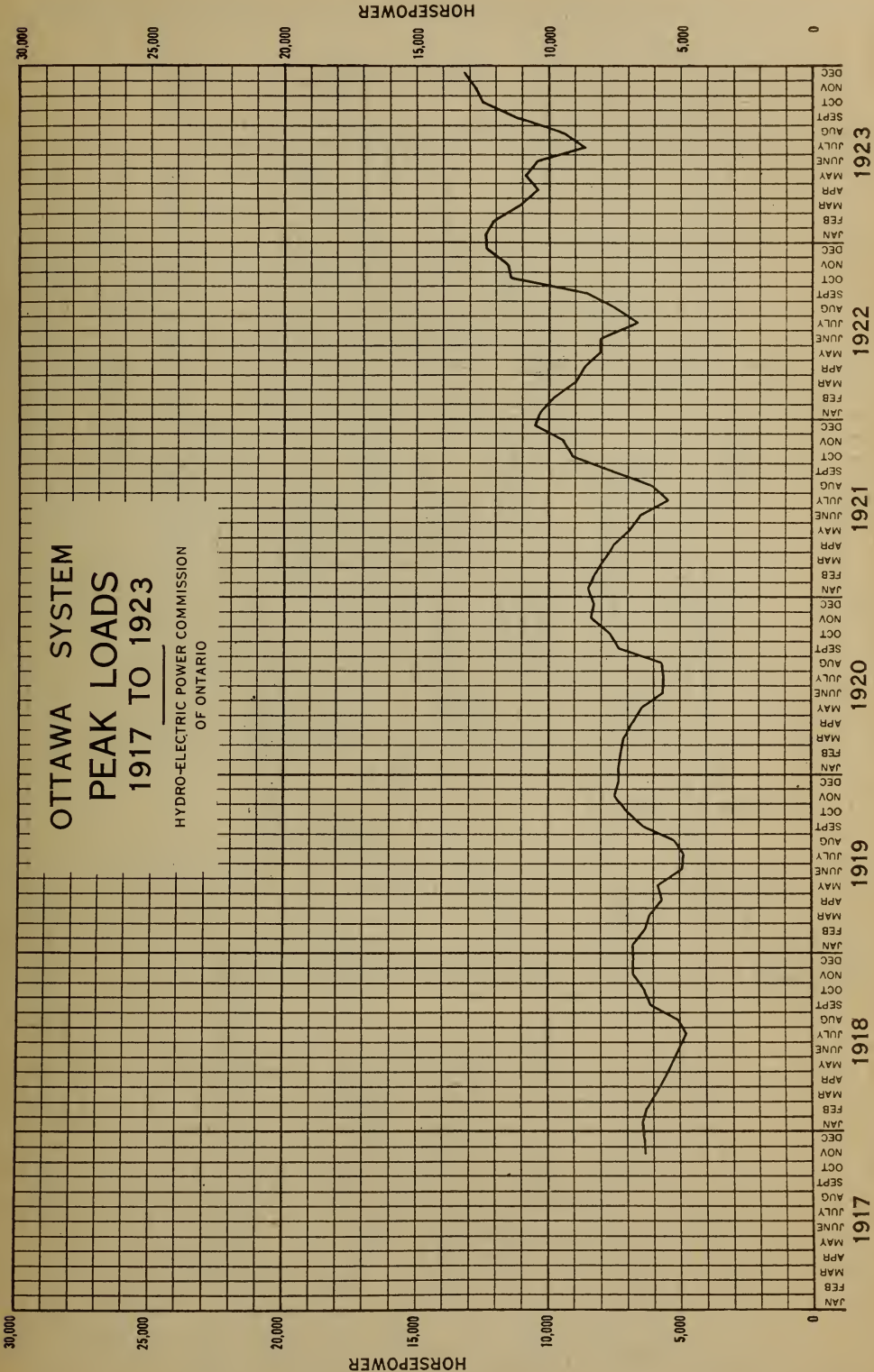
In last year's report mention was made of the improvement in the operation of the high-tension system due to changes in the relay system and the grounding of the system neutral. This improvement has been equally, if not more, apparent this year, and the study of the peculiar requirements of the system has been facilitated by the installation of relay indicators.

During the summer numerous and rather extensive changes in lines have been necessary in order to comply with the requirements of the Department of Public Highways. Poles, guys and stubs have been relocated, the line sections chiefly affected being those between Kingston and Napanee, the main line from Trenton to Oshawa near Brighton, Port Hope, Bowmanville, and Newcastle, also between Oshawa and Whitby.

Line grounding switches have been permanently installed at various points for the purpose of insuring the safety of linemen when working on lines which are not in service. These switches provide a convenient means of protecting the linemen against the possibility of the line being made alive while they are working on it. They are more effective than the usual grounds applied by the linemen where the work is being done, and since they do not relieve linemen of the obligation of making such local grounds, they provide an additional and very effective guarantee of safety.

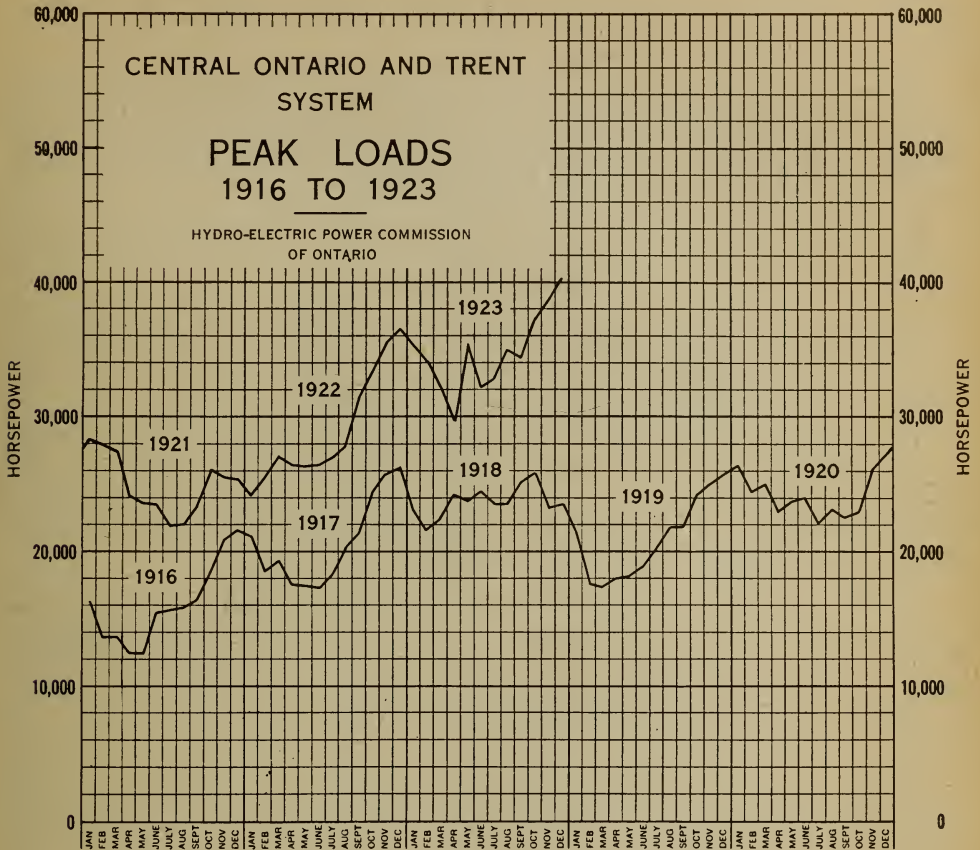
At Lehigh station the 750-kv-a., 44,000-volt transformer from the Belleville Cement Mill, the transference of which was mentioned in last year's report, has been permanently connected as a spare unit, and has already rendered very useful and timely service.











On Sunday, August 19, the Bowmanville station and distribution system was changed from 2,400 volts delta to 4,160 volts Y, requiring a change in the metering and relay equipment and the addition of current transformers, etc.

Brakes for the generators at plants Nos. 2 and 5 have been made up and are now ready for installation at these stations. These brakes will simplify and improve the methods at present in use at these stations for bringing generators to rest.

The reduction in staff at plant No. 2, Trenton, is, perhaps, the most noteworthy operating economy effected this year. At this plant the transformer and switching station, sometimes called the terminal station, is separate from the generating station, and in previous years it was a very important system switching point, but with the construction of the 44,000-volt line connecting Heely falls and Peterboro and the concentration of additional power near Heely falls, its importance as a switching point diminished. The switching station has been operated by a staff of three trained operators in addition to the operating staff at the generating station, but this year an attempt was made to operate the switching station without any continuous attendance. To accomplish this, telephone equipment was duplicated at both the terminal station and the generating station. Up to the present the experiment has met with success, and although since its inauguration the system has not experienced electric

storms of the severity previously experienced, there is every reason to believe that its success will continue and that three operators will be permanently dispensed with, reducing cost of operation.

Owing to the destruction by fire of the transformers and a part of the metering equipment at the Gillespie Talc Mill, Madoc, the Commission at the request of the customer constructed there a new station of the outdoor-type. This station is a great improvement upon the old one.

### Water Conditions

Although 1923 water conditions on the Trent river have been rather unfavourable, it is most gratifying in the circumstances to report that the flow regulation for power purposes has been greatly improved.

The power shortages during the months of January and February, 1923, which are shown on plate B2, have not been discussed in detail in this report because they are a result of the regulation pursued during the fall and winter of 1922. Their causes have been fully dealt with in Appendix III of last year's Annual Report, and need not here be repeated.

Water conditions are the result of a multitude of varying influences which are exceedingly difficult to measure or even to describe concisely, although many of them may be fairly accurately taken into account by a trained observer. Of these influences precipitation is the most important and, fortunately, can be and is recorded with at least approximate accuracy.

Plate A shows the average monthly precipitation as recorded by the five most informative stations in the Trent watershed. The precipitation is not expressed in inches, but as a percentage of the monthly normal precipitation for these stations as established by Meteorological Service records extending over a period of from ten to fifty years.

The low precipitation during December, 1922, and January and February, 1923, contributed to a reduction of the freshet rather than the intermediate run-off during these particular months. Very frequently the natural run-off during December, January and February meets the requirements of power, the years 1914-15 and 1922-23 being notable exceptions. During these months the influence of temperature upon the natural run-off is greater than that of precipitation, since the run-off due to occasional rises in temperature and to actual thaws is usually independent of the actual amount of snow on the ground, a superfluity of which usually remains to be carried off in the form of a freshet. This statement is perhaps more true of January and February than of December.

The precipitation during the freshet is of no value for power development, since it wastes. Some few of the back lakes which do not always fill may benefit by it, but the area affected is small. If the precipitation for a month or two following the freshet is excessive, some of it also will waste, but much of it is of value in soaking into the ground and increasing the great underground reserves, and also in maintaining the storage lakes full and preventing an early draft on them. Well replenished ground waters affect the flow for a period of months after the time of their replenishment. On account of the numerous contending factors in flow regulation, which vary greatly from year to year, no hard and fast statement as to the effect of spring precipitation can be made, but in 1923



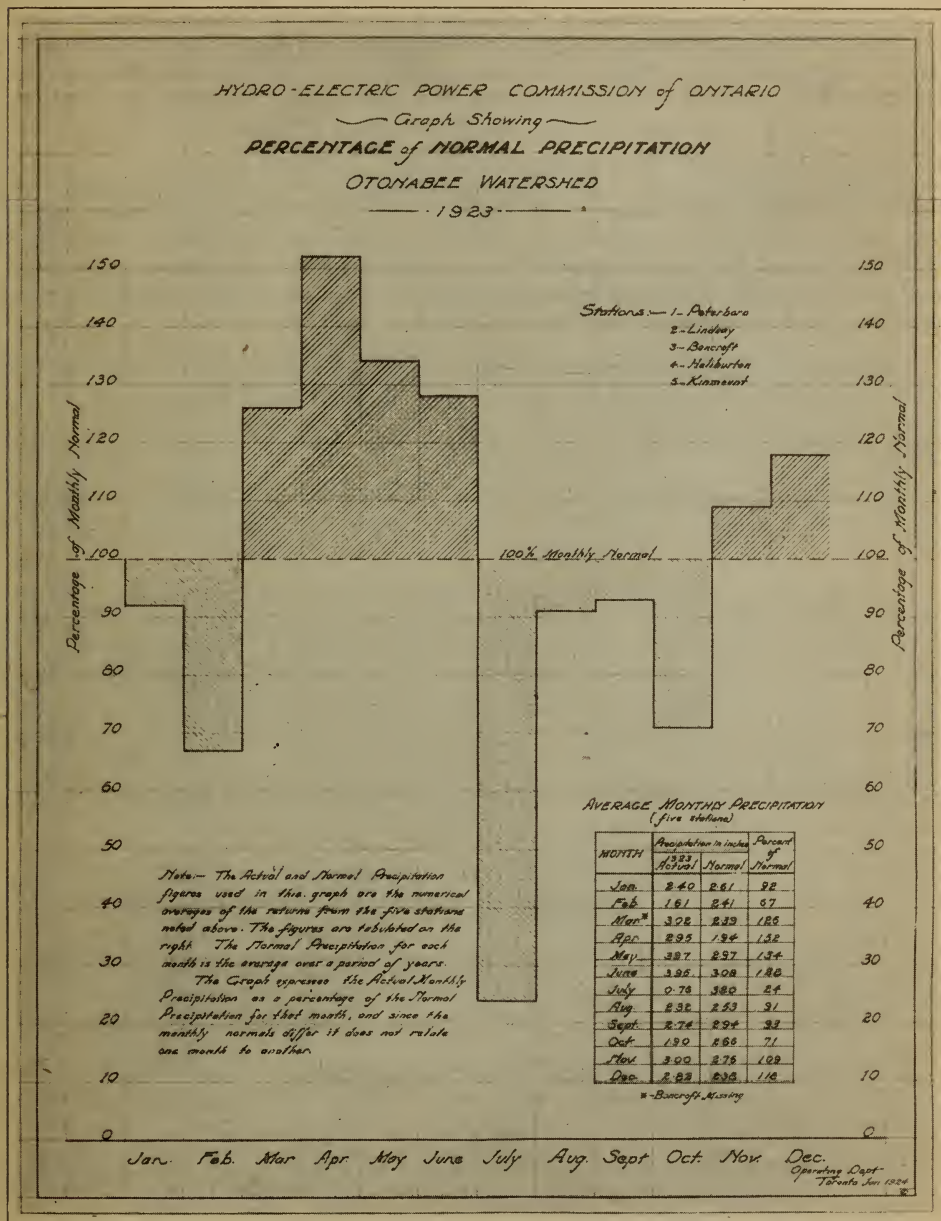


PLATE A—PRECIPITATION DATA

This graph represents the estimated actual monthly precipitation on the Otonabee watershed expressed as a percentage of the normal precipitation.

The estimate is based upon the actual and normal returns of the Meteorological Service for Peterboro, Lindsay, Bancroft, Haliburton and Kinmount. (See inset table.)

Although the numerical values differ from month to month the normal precipitation is taken as 100 per cent, hence the solidly hatched areas represent the amount by which the precipitation exceeded the average while the dotted hatched area represents in a similar manner the deficiencies.



it is quite apparent that some of the precipitation in excess of normal during April, May and June was beneficial through increasing the ground water reserve, and deferring any draft on the Kawartha lakes until the first week of July.

The precipitation during July was very low—only 24 per cent of a normal July. August and September also were a little low. In spite of this, however, the storage draft on the Kawartha lakes for these three months was, with the exception of the year 1921, less than any year since 1910.

During the first week of October, the Department of Railways and Canals reduced the flow of the Otonabee river, and on October 9, foreshadowed further reductions, and the Commission, in order to maintain canal levels, was obliged to reduce load. Had the contemplated reductions been carried out, the municipalities would have suffered from a serious shortage of power. (See plate B2, exception of the area below base line.)

Believing that any reduction of flow below the requirements of power was unnecessary, the Commission's views were immediately transmitted to the Department, both by letter and in conference, and certain suggestions and requests were made, the final outcome of which was that the Department increased the flow to an amount sufficient to meet the power demand, and continued in spite of the low precipitation in October and the first three weeks of November, to maintain a flow adequate for power purposes.

For the first three weeks of November the precipitation was about 50 per cent of normal, but during the last nine days it was sufficiently heavy to raise the average for the month to 9 per cent above normal. December was 18 per cent above normal. (See plate A.) In view of the low precipitation from July to October, inclusive, it is not surprising that November and December would be relatively a little high. Yet this moderate precipitation was sufficient, after replenishing the storage to the Department's satisfaction, to create a heavy surplus run-off which in terms of power amounted to more than double the entire system load. (See plate B2, graph No. 3.)

It is interesting to observe that the precipitation for the nine months beginning with April and ending with December was exactly normal. The distribution of the precipitation, however, was rather unfavourable. Not only was it far from uniform, but the low period occurred during the hot summer months when the evaporation and natural draft on storage is greatest, thus accentuating the variable storage draft necessary to maintain the required flow.

The Commission's confidence in the soundness of the methods of flow regulation recommended and pursued was largely based upon the following considerations.

(a) A study month by month of the records of lake levels and stream flow since 1910 shows conclusively that during this period the watershed with the available storage facilities was always capable of meeting the flow requirements of 1923. The average capacity of the watershed is far above the 1923 requirements. It is true that variable conditions of precipitation, evaporation, ground-water flow, etc., etc., would have necessitated widely different use of the storage waters during many of the years of this period, but since storage is created for the express purpose of augmenting the natural flow, as and when deficient, this is to be expected. In 1923, on account of the low precipitation from July 1 to November 21, the total storage in the Kawartha and back lakes was depleted rather more than usual at the final date mentioned, even though

conditions up to the end of June had been most favourable. The capability of the watershed, however, is established by the records of previous years, and if an unusual distribution of precipitation and other contributory factors requires an unusual draft on storage, there is no occasion to regulate thereafter on the assumption that the entire year will be a worse one than any of which we have records. It is, of course, easy to conceive of a combination of conditions so unfavourable that the available flow would fall below the requirements of 1923, but the fact that such a combination of conditions has not occurred from 1910 to 1924, the period over which useful records were available for study, indicates that the risk is not great.

(b) Even though anxiety is felt with regard to the ability of the watershed to maintain until the freshet the flow required for power purposes, it seems most unwise to create a power shortage before it has been proven necessary, since the chance of avoiding the shortage is thus destroyed. Furthermore, in deferring the shortage, no risk of increasing it is incurred. If the records available for study extended over a period of fifty or one hundred years, it is probable that water years worse than any disclosed by the thirteen year study would be found, but these very bad years would doubtless occur very rarely, and the possibility of their occurrence does not justify the serious power shortages which periodically occur as a result of flow regulation designed to guard against them.

The flow reduction, as originally proposed by the Department, would have necessitated load reductions involving three or four times the amount of energy which the public were short during the very serious shortage of July, 1922, whereas the course pursued avoided all but a fraction of this, and although the events of one year prove no general rule, it may at least be stated that the policy consistently advocated by the Commission has been put to the test and has worked out to the great advantage of all concerned, and that the evidence of another year's records entirely supports it.

The points mentioned in the foregoing, while interesting and important in themselves, are especially gratifying in view of the fact that this successful result has been accomplished as a direct result of co-operation. Under the existing conditions the Commission could not ask for better regulation for power purposes than that which occurred from the week ending October 5, to the period of surplus flow about the first of December. The comparatively insignificant wastage during this period is shown on plate B2, graph No. 3, and also by the hatched area between graphs one and two, which, though expressed as a weekly average, is equal to the area under graph No. 3. With this excellent advance in the direction of efficient co-operation, flow regulation problems of the future should be viewed with greatly increased confidence and optimism.

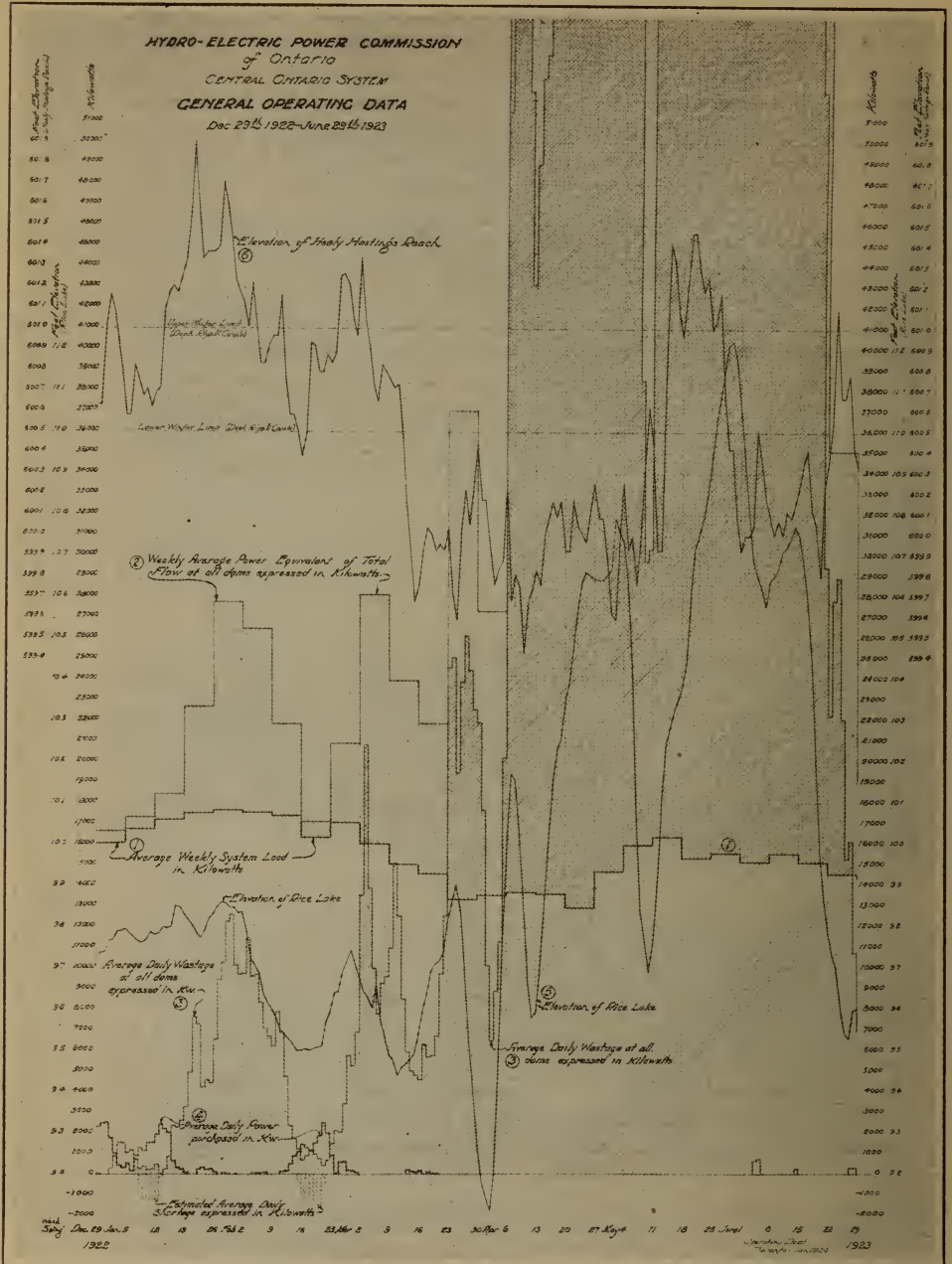


PLATE B1—GENERAL OPERATING DATA

December 29, 1922 to June 29, 1923

GRAPH No. 1—System average weekly load in kilowatts.

GRAPH No. 2—Weekly average power equivalent of total flow at all dams. This equals the weekly average system load plus the power equivalent of the weekly average wasteage of water at all plants from which the Commission derives its regular supply. The wasteage is shown by the dotted hatched area between graphs 2 and 1.

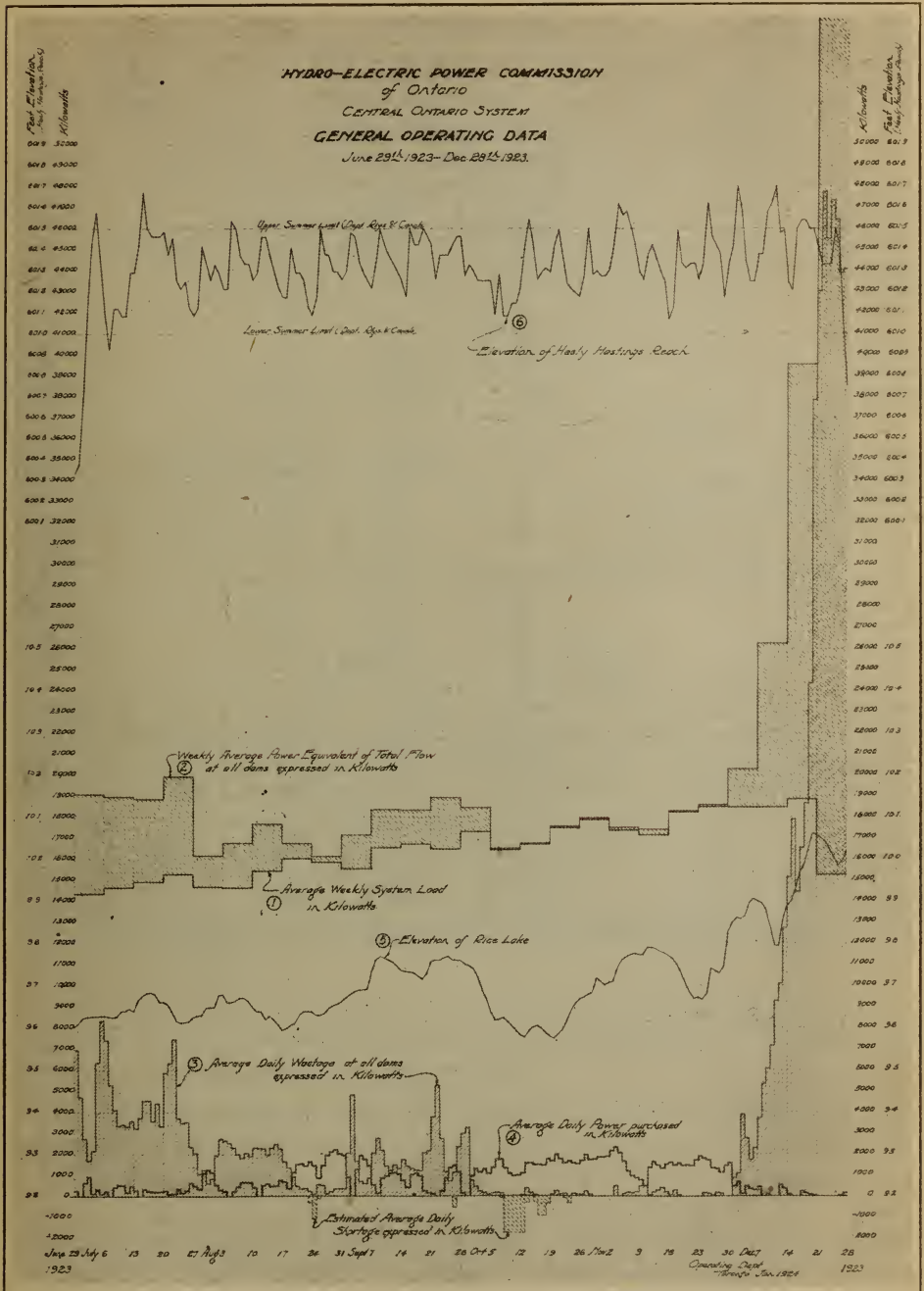
GRAPH No. 3—Average daily wasteage at all plants expressed in kilowatts. In the weekly aggregate the area under this graph equals the wasteage represented by the hatched area between graphs 2 and 1 and shows the daily distribution of this weekly wasteage.

GRAPH No. 4—Average daily power purchased in kilowatts.

GRAPH No. 5—Midnight elevation of Rice lake.

GRAPH No. 6—Midnight elevation of Heely-Hastings reach.





**PLATE B2—GENERAL OPERATING DATA**  
June 29, 1923 to December 29, 1923

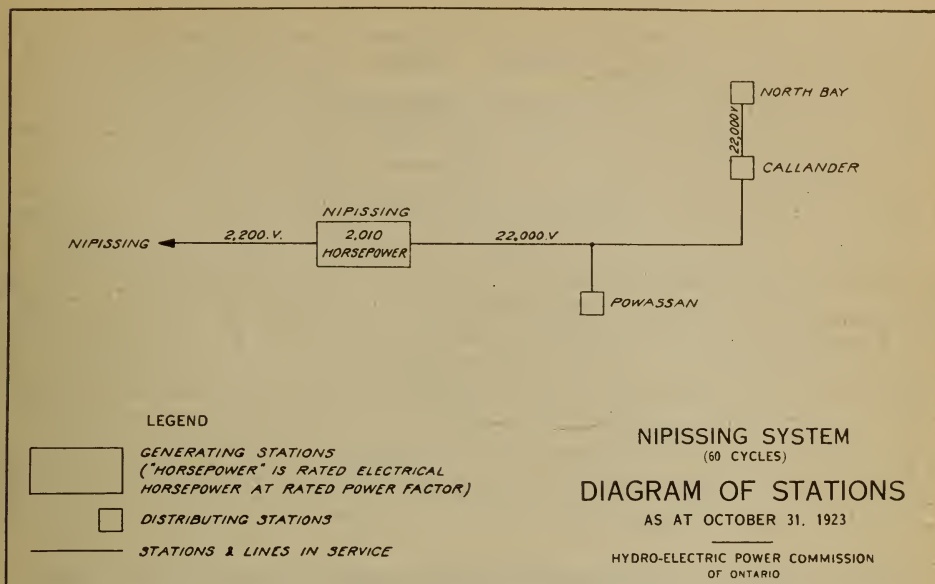
For general description see Plate B1.

The hatched areas below the base line represent power shortages. The shortages appearing on Plate B1 are a result of the regulation pursued during the previous year and are discussed in Appendix III of the Fifteenth Annual Report.

The five-week period from October 5, to November 30, is a striking example of efficient regulation. Note that the wastage represented by the area under Graph No. 3 has practically disappeared and that Graphs Nos. 1 and 2 are practically co-incident.

**CENTRAL ONTARIO AND TRENT SYSTEM—LOADS OF MUNICIPALITIES  
1921-1922-1923**

Municipality	Peak load in horsepower			Change in load, 1922-1923	
	Oct., 1921	Oct., 1922	Oct., 1923	Decrease	Increase
Belleville.....	1,943.7	2,624.8	2,868.6	.....	243.8
Bloomfield.....	22.7	35.0	71.8	.....	36.8
Bowmanville.....	1,119.3	1,285.0	1,156.8	128.2	.....
Brighton.....	97.3	174.2	175.8	.....	1.6
Cobourg.....	970.0	1,059.0	1,160.8	.....	101.8
Colborne.....	109.3	126.5	109.2	17.3	.....
Deseronto.....	250.6	287.0	312.3	.....	25.3
Havelock.....	71.4	69.8	72.3	.....	2.5
Kingston.....	2,506.7	2,547.0	3,178.4	.....	631.4
Lakefield.....	156.8	85.0	138.0	.....	53.0
Lindsay.....	1,375.3	1,260.0	1,282.8	.....	22.8
Madoc.....	143.4	152.0	184.4	.....	32.4
Marmora.....	49.5	49.4	50.6	.....	1.2
Milbrook.....	40.7	36.4	36.4	.....	.....
Napanee.....	565.6	576.4	604.5	.....	28.1
Newburg.....	386.0	160.8	490.6	.....	329.8
Newcastle.....	48.2	59.0	61.8	.....	2.8
Norwood.....	37.5	101.3	86.8	14.5	.....
Omeme.....	90.3	58.0	119.5	.....	61.5
Orono.....	48.2	40.0	41.2	.....	1.2
Oshawa.....	3,493.2	3,850.0	4,933.6	.....	1,083.6
Peterboro.....	4,886.0	4,306.2	5,839.3	.....	1,533.1
Picton.....	268.0	326.0	382.0	.....	56.0
Port Hope.....	575.0	608.0	782.8	.....	174.8
Stirling.....	107.2	135.3	157.7	.....	22.4
Trenton.....	671.5	823.0	865.9	.....	42.9
Tweed.....	106.5	144.7	148.7	.....	4.0
Wellington.....	63.0	74.0	73.7	0.3	.....
Whitby.....	509.3	583.0	666.2	.....	83.2



## NIPISSING SYSTEM

The demand for power on the Nipissing system has continued to increase, although it was already very close to the maximum generating capacity. As stated in the last Annual Report, the water storage areas were depleted in the fall of 1922. The heavy demand for power, combined with the low storage, resulted in a severe water shortage in the months of January, February and March, 1923, during which months the hydro-electric station at Nipissing was unable to meet the system demand for power, even with the assistance of the Commission's steam plant at North Bay, which was operated to full capacity throughout the period.

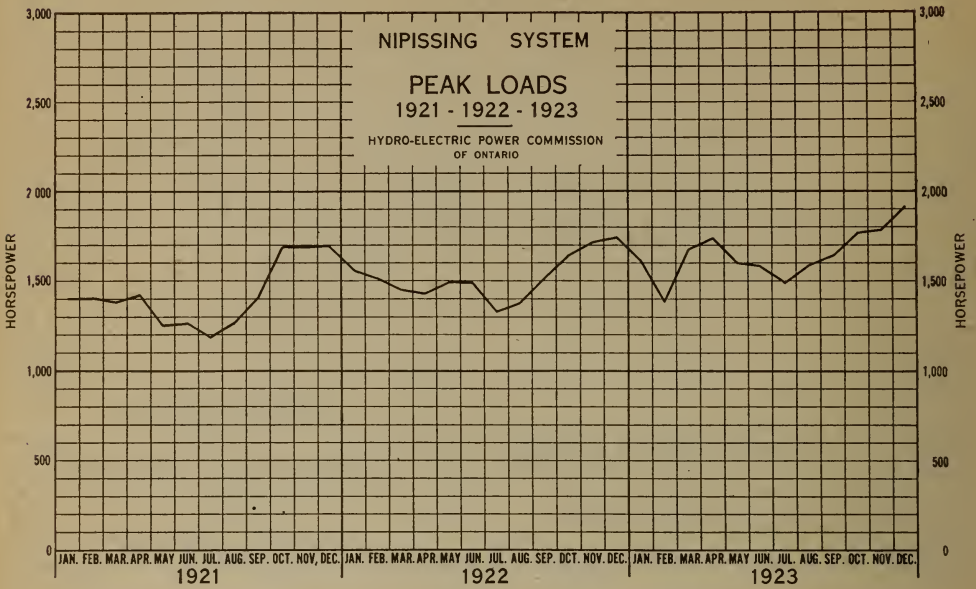
Outside of this period, the generating plant has been able to carry the system load, and has given continuous and satisfactory service in spite of the heavier demand and the higher load factors.

To relieve the power shortage, a new hydro-electric plant is being constructed at Bingham Chute, which should be ready for operation in December of this year.

The Commission's steam plant at North Bay was completely destroyed by fire during the summer. Owing to excessive cost of operation, this plant was not operated except during emergencies or power shortages. Fortunately it has not been needed since the date of the fire, as the hydro-electric plant has been able to take care of the load. A Diesel engine plant is now being erected at North Bay as an auxiliary to take care of emergencies.

Men have been kept employed ranging the storage areas and dams to insure a maximum supply of water for this year and the coming winter's operation. In the spring investigations were made with a view to increasing the storage of water in Braie lake, and securing the necessary flooding rights.





The storage dam at Braie lake, which was damaged by dynamite by some unknown parties in August of last year, was repaired. Considerable maintenance work was also carried out on the other storage lake dams.

At the Nipissing plant, the pipe line, surge tank and dams were repaired.

On the transmission line a large number of insulator pins and cross-arms had to be replaced, due to those in service having reached the end of their useful life, and threatening to interrupt service. Road work also necessitated a considerable amount of maintenance and alterations, and was the cause of a number of interruptions to service.

## SECTION III

### MUNICIPAL WORK

The Commission acts in an advisory capacity in connection with the operation of the various municipal Hydro Utilities with which it has contracts. In this connection, the Commission arranges for the purchase or construction of distribution systems and assists the municipal officials in making their financial arrangements to pay for the cost of same. The Commission also recommends all necessary rate adjustments, as provided under the Power Commission Act, and generally supervises the management and operation of all systems, more especially in the smaller municipalities, which are not of sufficient size to employ a manager with the technical knowledge necessary to handle properly all phases of the system's operation.

### NIAGARA SYSTEM

During the year, the load on the Niagara system continued to increase very rapidly, and contracts were signed with twelve new urban municipalities, seven of which were connected and supplied with service during the year.

During the year, forty new contracts were signed with additional townships, twenty-eight of which were given service during the year.

Negotiations were carried on with the municipalities served on the Essex County system, with a view to having these municipalities submit by-laws to their ratepayers and sign contracts with the Commission for power, thereby assuming the liability for the financial operation of this system. Arrangements are being made to have enabling and money by-laws submitted at the municipal elections in January, in all of the municipalities supplied on the Essex County system.

The work of extending the Queenston generating plant has been proceeded with during the year, and an additional generating capacity put into service to meet the increasing power demands.

Arrangements were also completed for supplying off-peak power from the Niagara system to the Eugenia system, through a rotary converter located at Mount Forest. This connection between the Niagara system and the Northern systems will result in considerable additional revenue to the Niagara system, and permit the Eugenia system to conserve its water storage, thereby very materially increasing the continuous capacity of that system.

General engineering assistance in connection with the operation and extensions to local Hydro systems was given to the following municipalities: Ailsa Craig, Aylmer, Ayr, Baden, Barton Township, Burford, Burgessville, Chippawa, Clinton, Delaware, Drayton, Drumbo, Dublin, Dundas, Dunnville, Elmira, Elora, Embro, Exeter, Fergus, Georgetown, Granton, Hagersville, Hamilton, Lambeth, Listowel, Lucan, Lynden, Merritton, Milverton,

Mitchell, Moorefield, Mount Brydges, New Hamburg, Niagara Falls, Niagara-on-the-Lake, Palmerston, Parkhill, Port Colborne, Port Dalhousie, Port Dover, Princeton, Queenston, Ridgeway, Rodney, St. Catharines, St. Marys, Sarnia, Seaforth, Stamford Township, Thorndale, Thorold, Tilbury, Waterford, Waterloo, Walkerville, Welland, West Lorne, Windsor.

Certain municipalities, in addition to receiving general engineering assistance in connection with the operation of the local Hydro systems, received also special engineering advice and assistance with respect to a number of matters, which are more fully referred to as follows:

**Acton**—Owing to increased power loads supplied on the system, it became necessary to install an additional feeder circuit and otherwise to alter and increase the capacity of the lines and equipment to take care of this increase as well as of the growth in the lighting loads.

**Barton Township**—With a view to giving service to approximately 200 additional consumers assistance was given to the municipality with regard to defining an area which had sufficient population to warrant the extension of its system. The construction of extensions to its street lighting system for three hundred additional lights also received attention.

**Beachville**—Due to the power load trebling in the village, it was considered advisable to recommend to the Trustees of the village that the 2,300-volt delta distribution system be changed over to a four-wire, 3-phase, 4,000-volt grounded Y system. Specifications were prepared and work started by the Commission, but it was deemed advisable to discontinue the work until next year, owing to proposed changes on the Provincial Highway, and to the fact that satisfactory arrangements could not be made for the removal of certain other foreign lines.

**Belle River**—A 26,000-volt line was constructed from Essex high-tension station in an easterly direction south of the Canadian Pacific Railway to a point just south of the village of Belle River. An outdoor substation of 150-kv-a. capacity was installed to supply power to the village of Belle River and to the Belle River rural power district. Power was turned on and the village commenced operating the system on December 5, 1922.

**Blyth**—On request of the village council information regarding a supply of power was given by the Commission. On October 18, 1923, by-laws were passed authorizing the council to contract with the Commission for a supply of 50 horsepower, and to cover the cost of building a distribution system in the village. It is expected that power will be supplied during 1924. See paragraph under Brussels.

**Brussels**—The village passed its enabling and money by-laws on October 16, 1923, and has entered into a contract with the Commission for the supply of 75 horsepower. It is expected that a 26,400-volt line will be built from Seaforth Junction to Walton and a 4,000-volt line from the step-down station at Walton to Brussels, and another 4,000-volt line from the same station to Blyth.

**Cayuga**—Information was given to the municipality of Cayuga respecting enabling and money by-laws relating to a supply of power for that municipality. The vote on these by-laws is to be taken during 1924.



**Clifford**—This village passed its enabling and money by-laws on October 4, 1923, and has contracted with the Commission for the supply of 25 horsepower. The construction of its distribution system was started and it is expected that service will be supplied from the Harriston substation by means of a 4,000-volt line which will be completed early in 1924.

**Courtright**—The construction of a 4,000-volt line from Corunna to Court-right, and of a distribution system in the village is being proceeded with under the Commission's Construction department. Power is expected to be turned on about December 15, 1923.

**Dorchester**—The operation of the local system was not satisfactory, due to the joint use of poles for telephone lines and electrical distribution system without proper clearances. A recommendation, with estimates and specifications, to remodel the system was made by the Commission to the municipality. As soon as satisfactory arrangements have been made with the Telephone and Telegraph Companies, the Commission will proceed, on behalf of the municipality, to remodel the distribution system to take care of the increased load.

**Dundas**—Increased consumption of power caused by both domestic and industrial uses has necessitated the enlarging of the municipality's substation by one hundred per cent; important changes are also being made in the secondary distribution system to accommodate this increase.

**Dunnville**—During the year, a large number of additional consumers were added to the local system; this necessitated capital extensions amounting to approximately \$10,000, for which amount debentures were issued.

**Dutton**—Since the lighting load increased approximately 35 per cent, it was considered necessary to recommend to the local management the erection of additional transformer capacity and the shortening of the distance each transformer served in the village. A power extension was also made during the year.

**Etobicoke Township**—Since the Etobicoke Township system was put into operation, over six years ago, with a load of approximately 80 horsepower, the system has been extended over a very wide area and the load has increased to over 800 horsepower. It became necessary during the year to make arrangements to supply part of the system from York station, which is more centrally located with regard to the central and northern portions of the Township system. The southern portion is still receiving its supply from the Etobicoke substation.

**Ford City-Riverside-Tecumseh**—At the time the distribution system of the Walkerville Light & Power Company was purchased in 1915, the system also supplied Ford City and extended into Sandwich east township. That part of the township immediately east of Ford City has recently been incorporated as the town of Riverside, and the village of Tecumseh has enlarged its boundaries to the easterly limits of Riverside. The power requirements of the three municipalities increased so rapidly that it became advisable to have each municipality assume ownership of its own distribution system. The necessary by-laws were passed and the standard agreements signed with the Commission. Power is supplied by the Commission through the Walkerville transformer station and operation was commenced on the new basis on November 1, 1922.

**Galt**—The engineers of the Commission have investigated the operating conditions of this system and recommended a number of changes, including a change in the distribution voltage from 2,200 to 4,000 volts. The load in Galt has shown a phenomenal increase due chiefly to the domestic uses of Hydro power for cooking and other purposes. This has necessitated considerable construction work in order to keep pace with the demand.

**Goderich**—A request was received by the municipality from the local grain elevators, for a supply of power, and the local Commission requested the assistance of the Commission in connection with this supply. Arrangements are now being made to construct the necessary lines and increase the capacity of the local substation to take care of these loads. These additional loads will very materially increase the amount of power taken by the municipality, making it approximately 900 horsepower.

**Hagersville**—During the year, approximately 400 additional horsepower was supplied to the Hagersville Quarries Limited to operate its plant. This necessitated an increase in the Commission's substation of three hundred kilowatts. Consideration was also given to the question of changing the distribution system from 2,200 to 4,000 volts in order to improve line regulation.

**Harriston**—On account of the rapidly increasing load, it has become necessary to remodel the distribution system in Harriston. The Commission's assistance was requested and plans and specifications prepared by the Commission's engineers have been forwarded to the municipality.

**Hespeler**—The work of remodelling the distribution system, which was started last year, was completed during the year. Since this improvement in distribution the load on the system has grown to such an extent that it has been found necessary to increase the local transformer station capacity, three 200-kv-a. transformers being recently installed. A 4,000-volt line has been constructed from the municipality to supply the Christie-Henderson Lime Company with power through the Hespeler substation.

**Ingersoll**—Owing to the increased load, recommendations were made to the local management on the substation extensions, and estimates submitted to cover the cost of various extensions and necessary changes. Certain changes to the distribution system in order better to handle the increased power and lighting load were also recommended.

**Jarvis**—During the year, this municipality voted on and carried by a large majority, enabling and money by-laws, and has entered into a contract with the Commission for a supply of power. On a request from the municipality, the Commission is constructing a distribution system which will be in operation early in 1924.

**Kitchener**—The ever-increasing load on the system of this municipality has necessitated considerable extensions and improvements to the system during the year, as well as an increase in the substation capacity and an increase in the transmission line capacity supplying the local substations. This latter work has been carried out by means of underground construction from the high-tension station to substation No. 1 and to the waterworks plant; new oil-breakers of larger capacity being installed to take care of the larger loads.

**Markham**—In order to improve the service, arrangements were made to build a 12,000-volt line from the Commission's 12,000-volt feeder on Yonge street to Markham, where a substation was erected and put into service on September 25, 1923.

**Merlin**—The construction of a step-down station at Fletcher was completed, also a 4,000-volt line from Fletcher to Merlin. A distribution system, which was constructed under the supervision of the engineers of the Commission, was put into operation on December 21, 1922.

**Merritton**—Owing to the rapid increase in the load during the year it became necessary to increase the capacity of the Merritton substation by approximately 100 per cent. The Merritton Hydro-Electric system has, therefore, requested the Commission to install one 300-kv-a., 3-phase, outdoor-type transformer. It is expected that this will be in service some time in December, 1923.

**Niagara-on-the-Lake**—Owing to rapidly increasing load on this system it was decided by the municipality to install one 300-kv-a., 3-phase, outdoor-type transformer to replace the three 50-kv-a. transformers at present installed. The municipality is issuing \$5,000 of additional debentures to take care of this new work.

**North York Township**—This municipality having been created from the northern portion of York Township, it became necessary to make a valuation of the existing light and power system lying in the municipality. A request was also made by the municipality for the purchase of the portion of the distribution systems formerly owned by the Toronto and York Radial Railway, the Toronto Suburban Railway and the Toronto and Niagara Power Companies and lying within the new township boundaries. This necessitated valuations of these systems and negotiations with the various owners for their purchase. This work was practically completed at the close of the year. The necessary by-laws were passed by the municipality and a contract signed with the Commission for the supply of power.

**Petrolia**—A double-circuit, 26,000-volt line was constructed from the Sarnia line to Petrolia waterworks station on lake Huron. An outdoor station was constructed to step down power to 550 volts. The capacity of the station is three 75-kv-a., air-cooled transformers. A centrifugal pump direct connected to an electric motor of 100 horsepower was installed by the town to take the place of the steam pump formerly used.

**Port Dalhousie**—Owing to increased load, caused by the use of electrical cooking appliances, it became necessary to reconstruct the primary and secondary distribution systems and to add additional transformer capacity. The voltage of distribution is also being changed to 4,000 volts to improve the regulation.

**Port Dover**—Extensions and improvements to the system are required in order to serve the waterworks and additional domestic consumers. To carry out this work necessitated the issuing of \$8,000 of debentures.

**Preston**—It was found necessary during the year to increase the local station transformer capacity, a third 750-kv-a., 3-phase transformer being installed to take care of the additional loads. It has also been found necessary to extend and increase the capacity of the main feeder lines in the distribution system; the plans for this work being prepared by the Commission's engineers.



**Riverside**—See note under Ford City.

**St. Clair Beach**—This village passed Hydro and money by-laws at the municipal elections of January, 1922. A distribution system was constructed in the village and put into operation during the summer of 1922, being finally completed November 21, 1922.

**St. Jacobs**—During the year, it was found necessary to increase the local distribution system by increasing the capacity of the distribution transformers and secondaries. Upon request from the municipality, this work was done under the supervision of the Commission's engineers.

**St. Thomas**—Changes were made to the waterworks feeder installation to handle better the increased load. An extension was made to the M.C.R. 13,200-volt substation and meter equipment was installed by the company to obtain proper records for billing purposes.

**Sandwich**—The present distribution system was installed by the Commission, but it is growing so rapidly that it is considered advisable to have the municipality assume ownership. Information was furnished the Council to enable it to submit to the ratepayers the question of the purchase of the system by the town. The necessary by-laws will probably be voted on at the coming municipal elections.

**Scarboro Township**—Many extensions were made in order to supply service to new customers in this rapidly growing municipality. The township purchased the portion of the distribution system of the Toronto and Niagara Power Company lying in the municipality and these lines were combined with the former system.

**Stouffville**—The municipality, having passed the necessary by-laws, signed an agreement with the Commission for the supply of power. Arrangements were then made for the delivery of this power and for the rebuilding of the municipally-owned distribution system. Power was first given on September 28, 1923.

**Stratford**—Increased load has necessitated the installation of a new 1,500-kv-a., 3-phase transformer in the substation, and in addition the Commission's engineers have been requested to increase the capacity of the switching equipment and outgoing feeders to meet the demands. It has also been found necessary to recommend changing the distribution voltage from 2,200 to 4,000 volts. Work is now in progress and it is expected that the station will be completed during 1924.

**Sutton**—During the year, a Hydro enabling by-law and a money by-law for \$28,000 was submitted to the ratepayers and passed. The existing distribution system was purchased by the municipality and extended so as to make electric service available to all the residents of the municipality. A line was constructed to serve the municipality and service was supplied on July 20, 1923.

**Tavistock**—The increased demand for power for domestic uses necessitated the entire rebuilding of the secondary distribution system. Larger and additional transformers were also erected, the work being carried out under the supervision of the Commission's engineers.

**Tecumseh**—See note under Ford City.

**Wellesley**—Considerable rebuilding of the distribution system in this village was made necessary during the year by the increased demands for electrical energy.

**Wheatley**—Information was furnished to this village giving particulars of the cost of power and the cost of a distribution system. The necessary by-laws were submitted and carried. A valuation of the local distribution system in the village was made and negotiations were entered into with a view to purchasing the plant. It is expected that power will be available for the municipality early in the coming year.

### NIAGARA SYSTEM—RURAL\*

**Aylmer Rural Power District**—Estimates have been prepared and a considerable amount of preliminary work has been done in connection with a proposed rural line from Aylmer to Springfield. In this connection, meetings were held in the police villages and larger hamlets in this area at which details regarding rural electrical service were explained. It is expected that this line will be constructed early in the coming year.

**Beamsville Rural Power District**—This system was placed in service in January, 1923. Since that time a large number of additional consumers have been added to the system. Street lighting has also been installed in the police villages of Campden and Jordan Station.

**Belle River Rural Power District**—Sixteen miles of line in the Belle River rural power district were completed and made alive on December 5, 1922. This line supplies the summer resort on the south shore of lake St. Clair and the hamlet of St. Joachim.

**Bothwell Rural Power District**—Negotiations were carried on and a contract was made with the Dominion Petroleum Company of Glencoe for a supply of power to its oil pumping rigs in the oil field north of Glencoe. Three and one-half miles of line are being constructed and it is expected that the line will be in operation about January 1, 1924.

**Brant Rural Power District**—Early in the year the construction of 21 miles of rural lines was completed and these lines have been put into operation to give service to 94 rural consumers.

**Delaware Rural Power District**—During the year approximately eleven miles of overhead primary line were constructed to serve additional consumers. Meetings were held in the northern part of the district for the purpose of informing prospective consumers regarding the advantages and cost of rural service. Estimates were also prepared in connection with the cost of a street lighting system for the hamlet of Melbourne.

**Galt Rural Power District**—Some additional customers have been connected to the rural line which runs on both sides of the river south of Galt.

**Homer Rural Power District**—During the year about two and one-half miles of line were constructed to serve forty additional consumers.

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\* See statement relating to Rural work at end of this Section, pages 68 to 72.

**Jordan Rural Power District**—Early in the year three miles of overhead lines and five miles of underground line were constructed to serve new consumers.

**London Rural Power District**—A considerable amount of construction work was undertaken during the year, and over thirty miles of primary line will have been constructed by the end of December, 1923. Arrangements have been made for the installation of an outdoor-type, 12,000-volt to 4,000-volt substation south of the city to supply part of the London rural power district.

**Lynden Rural Power District**—During the year contracts were obtained in this district requiring twelve miles of underground line. These extensions will be completed and put into service early in the coming year.

**Niagara Rural Power District**—Contracts for electric service were received in this district during the year which require the construction of 18.25 miles of line. Of this, 14 miles will be underground construction and the remainder overhead. Most of this construction will be completed during the year 1923 and the entire extension will be put into service early in 1924.

**Petrolia Rural Power District**—A small extension of rural line to serve additional customers was completed in the Petrolia rural power district. This line is supplied from the Commission's transformer station at Perch.

**Preston Rural Power District**—During the year some twenty-five miles of standard rural line have been built to supply the farming district, and the suburban consumers south of Kitchener, including the hamlets of Rosendale and Bloomingdale north of Breslau and Bridgeport.

**St. Jacobs Rural Power District**—A line from St. Jacobs to the village of Linwood, a distance of approximately ten and one-half miles, is now under construction. This is a standard rural line and during 1924 service will be given to the farmers en route.

**St. Thomas Rural Power District**—During the year approximately thirty miles of primary line were constructed to supply over two hundred consumers. In order to take care of the power requirements of this district it has been necessary to install a 150-kv-a., outdoor-type transforming station. Meetings were held in practically all of the police villages and hamlets in the district, at which all matters pertaining to power in rural districts were thoroughly explained.

**Saltfleet Rural Power District**—During the year this system has shown steady growth. At the present time there are 67.25 miles of line giving service to 696 consumers. With the exception of about five miles all lines are underground construction. Plans are being prepared to serve a number of new consumers in various parts of the district.

**Sandwich Rural Power District**—Negotiations were carried on with the Windsor Hydro-Electric system and approval was given for the taking over of all lines in the township of Sandwich West, now supplied by the Windsor system. These lines will be taken over on November 1, 1923, and extensions to some new consumers will be made where necessary.



**Sarnia Rural Power District**—Six and three-quarter miles of line were constructed in the townships of Sarnia and Moore to supply the hamlet of Corunna and a summer resort on Stag Island. Also the line was extended east from Sarnia on the London road to supply farmers and suburban consumers. Power was turned on on July 4, 1923.

**Streetsville Rural Power District**—This district was created to supply customers situated north of the village of Streetsville. Approximately one mile of line has been constructed. Service was first given on December 21, 1922.

**Tavistock Rural Power District**—A line approximately four miles long was built between Tavistock and Shakespeare. Service is being supplied to some fifty-five customers, including a number of consumers in the hamlet of Shakespeare.

**Tillsonburg Rural Power District**—Six and one-half miles of primary line were constructed in this district to serve fifty-two rural consumers, and plans are under way for a number of additional extensions during the coming year.

At the request of the township councils of Southwold and Yarmouth, estimates were prepared in connection with the cost of street-lighting systems in Shedden, Fingal and Union. These estimates were forwarded to the clerks of the various municipalities interested.

**Wallaceburg Rural Power District**—Plans were completed and work was commenced on the construction of approximately twenty miles of rural line in this district. This system will supply power for the operation of drainage pumps in the township gore of Chatham and also supply power to the police villages of Sombra and Port Lambton. A 4,000-volt feeder panel and switch with metering equipment were installed in the Commission's Wallaceburg distributing station. These lines will be put into operation in December, 1923.

**Woodbridge Rural Power District**—Arrangements were made for supplying electrical service to the district immediately east of the village of Woodbridge. About two miles of line were built and power was first delivered on January 29, 1923.

## ESSEX COUNTY SYSTEM

The Essex County system was purchased by the Commission in 1918 from the Essex County Light & Power Company and has since been largely extended and improved and has been placed in a very favourable condition financially. It is considered advisable by the Commission that the municipalities supplied should submit Hydro by-laws to their ratepayers, sign contracts with the Commission and assume ownership of their respective local distribution systems and assume their share of the liability as partner owners of the system, and steps are being taken by a number of the towns to submit the necessary by-laws at the coming municipal elections.

The capacities of the transformer stations at Amherstburg and at Leamington were increased during the year and numerous extensions and improvements were made to the distribution systems in the towns; considerable extensions were also made in the rural districts.

## SEVERN SYSTEM

The investigation of the various undeveloped power sites in the district which was begun last year was continued for the purpose of ascertaining the most suitable and economical source from which to obtain additional power. After careful consideration it has been definitely decided to proceed with an enlargement of the Muskoka development and to deliver power therefrom to the Severn system by means of a transmission line tied in to the latter at Waubaushene. By this means an additional amount of power equivalent to slightly more than fifty per cent of the present capacity of the Big Chute development will be obtainable for the Severn system. In the meantime, the temporary agreement with the Water & Light Commission of the town of Orillia was renewed for a period of another year; the amount of power held in reserve, however, being increased from 800 to 1,200 horsepower.

Engineering assistance of a general nature and advice concerning details of operation were given to the following municipalities from time to time throughout the year: Alliston, Barrie, Beeton, Bradford, Coldwater, Collingwood, Cookstown, Creemore, Elmvale, Midland, Penetanguishene, Port McNicoll, Stayner, Thornton, Tottenham, Victoria Harbor, Waubaushene.

**Barrie**—The local Commission was given special assistance and advice concerning the installation of an underground system on the main street of the town, inclusive of all primary lines and feeders in the business section, as well as a "white way" ornamental street lighting system. Surveys were made and designs and estimates prepared and submitted. All arrangements are completed for starting the work as early in the coming spring as weather conditions will permit.

**Midland**—In addition to receiving assistance on matters pertaining to general operation, the local Commission was further assisted in making provision for service to a large industry requiring from 1,500 to 2,000 horsepower, for operating a pulp mill and for the manufacturing of fibre board; a particularly interesting feature of this industry being the utilization of sawmill refuse, heretofore waste material, for the principal portion of its product. Advice was given concerning the agreement for supplying power, the extension of transmission lines and the design and construction of a special substation for this customer.

## SEVERN SYSTEM—RURAL

During the year considerable progress was made with distribution of power in rural power districts in various parts of the Severn system. The construction of lines in these districts was, in large measure, a direct result of the effort and educational work of previous years. Details of the work performed in the various rural power districts on the Severn system are as follows:

**Alliston Rural Power District**—Assistance and information was given to a group of farmers in this district located between the village of Cookstown and the town of Alliston in the township of Tecumseh. Estimates and rates were prepared and submitted and details of individual operating costs discussed with the various parties interested. As yet, arrangements have not been completed for constructing this line.

**Barrie Rural Power District**—A rural line, arrangements for which were completed last year, was constructed in this district and the electrical energy obtained therefor from the Barrie distribution system. This line provides service for a large number of summer cottages at Shanty Bay and for residents in the adjacent district. The line was made alive and placed in operation during the month of August. The active area in this district has, up to the present time, being confined mostly to the southern portion of Oro township.

**Elmvale Rural Power District**—An agreement was executed between the Commission and the township of Flos, the greater portion of which lies within this district, and arrangements were completed for providing service for eighteen customers together with the installation of a street lighting system in the hamlet of Phelpston. The material for this work was delivered and instructions issued for performing the work, which will be undertaken during the early part of next year.

**Midland Rural Power District**—Complete information and assistance was given to a group of farmers near the town of Midland in the township of Tay concerning rural service in that section of the district and before the close of the year arrangements were completed for proceeding with the construction of a rural line, energy to be obtained from the Midland distribution system

**Nottawasaga Rural Power District**—Various extensions were made to the lines in this district throughout the year, and service was given to several additional customers. This district, which comprises that portion of Nottawasaga township which lies immediately to the south of the town of Collingwood, as well as a portion of the townships of Collingwood and Osprey, is supplied from the Collingwood distribution system and was the first rural power district organized and placed in operation on the Severn system.

**Stayner Rural Power District**—The summer resort at Wasaga Beach, situated within this district, was given service in the month of July. A line approximately eleven miles long was constructed from the terminus of the Stayner distribution system to serve the district. The various cottages were connected to the line immediately the interior wiring work was completed and before the season closed 129 customers were receiving service. The power demand established by this district was approximately 35 horsepower.

## EUGENIA SYSTEM

The investigation begun last year to determine the most satisfactory means of securing additional power for the Eugenia system was continued and it was finally decided to construct a tie line to tie in with the Niagara system and to install a frequency changing station at Mount Forest for the purpose of changing the frequency and voltage of the Niagara lines to conform to the voltage and frequency of the Eugenia lines. The necessary transmission lines and substation for this purpose were installed and placed in operation during the year. In addition to the Niagara connection, it was also decided to provide a second pipe line at Eugenia development for the purpose of increasing the plant capacity by approximately 2,000 horsepower. Contracts for this work were let, and it is expected that the work will be completed early in the new year.



A meeting of the "Association of the Eugenia System Municipalities", details of the formation of which were given in the last Annual Report, was held in Owen Sound on May 30, 1923. Delegates from the various municipalities were present, as well as various members of the Commission's staff and a complete discussion took place at this meeting concerning all matters relating to the finances of the Eugenia system and the plans of the Commission in providing for an additional supply of power to supplement that obtained from the development at Eugenia falls. The arrangements covering the installation of the frequency changing station at Mount Forest and the transmission line between the Eugenia and Niagara systems, together with the details concerning the installation of the second pipe line at Eugenia, were explained in detail.

General engineering assistance and advice concerning method and details of operation were given to the following municipalities from time to time throughout the year: Arthur, Chatsworth, Chesley, Dundalk, Durham, Elmwood, Flesherton, Grand Valley, Hanover, Holstein, Kincardine, Lucknow, Markdale, Mount Forest, Neustadt, Orangeville, Owen Sound, Priceville, Ripley, Shelburne, Tara, Teeswater and Wingham.

Certain municipalities, in addition to receiving general engineering assistance concerning the operation of the local Hydro systems, received special engineering advice and assistance with respect to a number of matters which are fully referred to as follows:

**Fordwich**—Information was submitted to this municipality involving the design and installation of a generating station and distribution system together with estimates covering the cost thereof, and this installation was so planned that it could be utilized satisfactorily until Hydro service was available. The system, however, was so arranged as to permit change to the latter with a minimum expense.

**Meaford**—A money by-law for \$65,000 was submitted to the ratepayers at the January elections and carried. This by-law provided for an issue of debentures to take care of the purchase of the private plant and the reconstruction of the distribution system. A contract was executed between the municipality and the Commission covering Hydro service and arrangements completed for providing this by means of an extension of the Eugenia system transmission lines and the installation of a substation to transform the voltage to that suitable for local distribution. A distribution system, including a complete rearrangement of the street-lighting circuits, was designed and special assistance was given to the local officials in reconstructing the existing system to conform to the new plan. Special assistance was also given to this municipality in completing the purchase of the local distribution system from the private owners and in arranging for service therefrom until Hydro power could be delivered. Engineering advice was also given concerning the installation of electric motor driven pumps for the waterworks plant, replacing the present steam driven units.

**Paisley**—A distribution system was designed and constructed by the Commission for this municipality and placed in operation on August 13, 1923, service being given over a 4,000-volt line fed out of Chesley substation and terminating at the village limits. Special assistance was given to the local officials in placing the new system in operation.

## EUGENIA SYSTEM—RURAL

Information pertaining to rural service was submitted to various townships in the Eugenia system. This information, which included the preparation and submission of estimates and rates, advice concerning proper procedure to be followed for obtaining service and operating rural lines, and data as to the individual cost for various customers, was given to the following townships: Derby, Egremont, Kinloss, Melancthon, Normanby and Proton. These townships have not yet been organized into active rural power districts.

**Flesherton Rural Power District**—Special assistance was given to this district by completely reconstructing the distribution system in the hamlet of Eugenia. The boundaries of this district include that portion of Artemesia adjacent to the hamlet of Eugenia and the village of Flesherton, as well as a portion of the township of Osprey.

## WASDELLS SYSTEM

Engineering assistance of a general nature was given throughout the year to the various towns comprising the Wasdells system. This assistance, which included advice concerning the application of rates, making extensions to the local distribution systems, service to power customers and other matters, was given to the following towns: Beaverton, Brechin, Cannington, Kirkfield, Port Perry, Sunderland, Uxbridge and Woodville.

**Victoria Road**—Special assistance was given to the hamlet of Victoria Road in providing service from the Kirkfield substation. A syndicate was formed called the "Victoria Road Mutual Electric Association" consisting of practically all of the consumers in the hamlet, which undertook to construct a local distribution system and a connecting transmission line to the Kirkfield substation. Power is sold to the Association by the Commission and measured at the latter point. About twenty lighting customers and one power customer are receiving service in this hamlet.

## WASDELLS SYSTEM—RURAL

General assistance pertaining to operation was given to various townships in the Wasdells district in which existing rural distribution systems are located. This assistance was given to the townships of Brock, Eldon and Thorah. Rural lines have been operated in these townships for several years, but due to certain difficulties they have not yet been organized into standard rural power districts. It is anticipated that these difficulties will be overcome during the coming year.

Special assistance was given to the following rural power districts:

**Mariposa Rural Power District**—A distribution system was constructed in this district and placed in operation during the month of September, service being given to 36 farms as well as to 76 customers in the hamlets of Little Britain and Oakwood. The boundaries of this district include the greater portion of the township of Mariposa.

**Port Perry Rural Power District**—A distribution system was constructed and placed in operation during the year in the hamlet of Greenbank in Reach township, service being given to twelve hamlet customers in that locality. The boundaries of this district comprise the greater portion of Reach township as well as the whole of Scugog township.

## MUSKOKA SYSTEM

An investigation was made during the year respecting the construction of an extension to the development serving this district to take care of the growing loads on the system as well as to furnish the surplus power not required in the Muskoka district to the Severn system. It has been decided to proceed with this work as early as possible in the new year. Engineering assistance and general advice concerning details of operation were given at various times throughout the year to the municipalities of Gravenhurst and Huntsville, which comprise this system.

## ST. LAWRENCE SYSTEM

The present fiscal year has been one in which the increase of power supplied to industries on this system is of note. The amount of power required to meet the needs of all customers is nearly double the amount needed in the previous fiscal year. The Eugene Phillips Electrical Works, Limited, first took a supply from the system in November, 1922, and the plant formerly known as the Cornwall Pulp Company, started operations again in February, 1923, under new control. All municipalities have increased their power demands over previous years, and a number have been able to reduce the rates to users.

**Alexandria**—The demand for power for this municipality, for 1923, has increased approximately 35 per cent over power demand taken in 1922. Additional power consumers were given service during the year. An extension of the distribution system is proposed, to supply an industrial load of 60 horsepower and several lighting consumers in the hamlet of Green Valley which is about three and one-half miles south of Alexandria.

**Apple Hill**—Several new lighting consumers were connected during the year. Due to this, the power demand of this municipality shows an increase of approximately nine per cent over the demand taken in 1922.

**Brockville**—A reduction of rates to customers was made during the year, due to the reduced cost of power supplied to the municipality. The quantity of power delivered to the Eugene Phillips Company has been the cause of this reduced cost of power. The municipal load has also increased and reductions have been made in operating costs by the municipal officials. These factors have also helped to effect rate reductions.

**Cardinal**—In 1922, estimates on the cost of power and of a distribution system, as well as a report on the value of the present plant, were submitted to the Council of the municipality, but in 1923 further information was not requested by the Council owing to the owners of the present plant reconstructing a portion of the distribution system in order to render more satisfactory service.

**Chesterville**—The power demand for 1923 has increased approximately seventeen per cent over that taken in 1922, due to the increase in demand for power for industrial purposes.



**Finch**—Rural meetings were held in Finch township during the year for the purpose of obtaining the co-operation of rural residents to take service from the proposed transmission line from Chesterville to Finch. Estimates were prepared on the cost of power to Finch, without any rural load on the line, but sufficient contracts were not obtained in Finch village to warrant the construction of a transmission line from Chesterville.

**Hawkesbury**—During the year, a request was received from this municipality for estimates on the cost of delivering 1,000 and 2,000 horsepower, and also, of the value of the present distribution system. These estimates and valuation were prepared and submitted. It was proposed to supply this municipality from an extension of the 44,000-volt line from Alexandria. A further request was received for estimates on delivery of 3,000 and 4,000 horsepower.

**Lancaster**—The power load of this village increased approximately twenty per cent over the power taken for 1922. There has been a considerable increase in the number of lighting consumers.

**Martintown**—There has been during the year an increase in the number of lighting consumers and an increase of approximately ten per cent in the demand for power of the municipality.

**Maxville**—During the year, there were additional lighting consumers and one additional power consumer connected to the distribution system. The power load taken by this village is increasing, the increase for 1923 being approximately 23 per cent. Public meetings were held in the rural district, during the year, for the purpose of obtaining consumers in the rural district north and west of Maxville, but sufficient interest was not taken by the rural residents to warrant any extension being made.

**Prescott**—There was a reduction in all rates in this municipality on account of the good financial condition of the local utility and the surplus made in 1922. The cost of power supplied to the municipality is also reduced.

**Williamsburg**—During the year, the power required for lighting has increased and in consequence the demand of this police village has, for this year, increased approximately 23 per cent over the demand taken for 1922.

**Winchester**—There was an increase during the year in the number of lighting consumers and also an increase in the use of appliances, and, in consequence, the power for the municipality increased approximately fifteen per cent.

## ST. LAWRENCE SYSTEM—RURAL

During the year preliminary engineering investigations were carried on in rural districts not established, and numerous meetings were held in various localities at the request of township councils and interested communities.

**Apple Hill Rural Power District**—During the year, an agreement was entered into with the township of Kenyon to supply rural residents in this township, which is part of the Apple Hill rural power district.

**Brockville Rural Power District**—The operating statement of the previous year showed a sufficient surplus to enable the Commission to make a reduction in rates to most customers in this district. An effort was made to interest sufficient parties west of Brockville, so that a transmission line could be extended to Lyn, Mallorytown and other places in the district.

**Chesterville Rural Power District**—A number of meetings were held in this district at which the question of electrical rural service was discussed and explained. Changes were made so that the district may be supplied direct from the Chesterville substation.

**Martintown Rural Power District**—During the year, additional consumers were added and extensions were made to the distribution system in this district.

**Maxville Rural Power District**—Public meetings were held in Maxville and Moose Creek during the year, for the purpose of submitting information on cost of service to rural residents, but as yet sufficient contracts have not been obtained to warrant the construction of a distribution system.

**Prescott Rural Power District**—About thirteen consumers have been added to this district during the year, one of these being a planing mill using 20 horsepower. The village of Spencerville, which is part of the system, has also installed a street lighting system.

## RIDEAU SYSTEM

Owing to the growth of load on the High Falls plant and to the failure of one of the storage dams at Mazinaw lake, a severe shortage of water was experienced during the winter months on the Rideau system. The Rideau Power Company was also unable to deliver the usual amount of power during this period owing to water conditions on the Rideau river, and a shortage of power seemed inevitable. The Commission anticipated this situation by taking over the municipal steam plant at Smiths Falls, putting it in running condition and operating it for about six weeks, while some power was also obtained from the Commission's plant at Carleton Place. By means of these measures and the co-operation of the municipalities concerned, the shortage of water was not seriously felt, and although the use of a steam plant has considerably increased the operating costs, the system has completed a very successful financial year and may now be considered as operating under the most economical conditions possible, with all plants nearly loaded. Provided the Grenville Crushed Rock Company ceases operations in another year, as was its original intention, sufficient power may be available to carry the municipalities for some time, but at present the system has no appreciable amount of power available for future development.

**Carleton Place**—The load in this municipality shows a considerable increase over that of last year as there have been considerable extensions made by the various industrial concerns in this town. A reduction in the lighting rates was made during the year.

**Kemptville**—A considerable reduction in rates was made in this village, during the year, to all classes of consumers, and the rate for power paid to the Commission was also lowered. This was the result of the excellent financial showing made by the village in the operation of its local system during 1922. Assistance was given to this municipality in a legal action brought against it by the Kemptville Milling Company, and this action was decided in favour of the village, which obtained judgment with costs and damages on a counter-claim. An appeal was entered, but a settlement between the parties has now been reached.

**Lanark**—This village, which has a population of about 500 people, closed its first year's operation with a surplus of \$1,185.06. Rates for lighting and power have been considerably reduced.

**Perth**—The analysis of operation prepared by the Commission shows that this municipality has been making a considerable profit on its lighting business. The Commission, therefore, recommended reductions in rates to the domestic and commercial lighting consumers, and these have been adopted by the Perth Commission.

**Smiths Falls**—The load in this municipality has been well maintained and the local operating conditions have been improved. Considerable work has been done, improving the old distribution system.

## THUNDER BAY SYSTEM

Arrangements were completed during the year for constructing an extension to the development at Cameron falls on the Nipigon river, which supplies power to the Thunder Bay system, which at the present time consists of the municipality of Port Arthur only. This extension is required to take care of the growing load in the municipality of Port Arthur, which has greatly increased during the past year, as well as to provide energy for additional customers such as pulp and paper mills at Fort William and Nipigon village. Negotiations were carried on with the Kaministiquia Power Company concerning an interchange of power for emergency purposes and a proposed agreement was drawn up and submitted to the company. This agreement has not yet been executed. Arrangements were made for supplying power to a large pulp and paper mill located in Fort William and an agreement was drawn up and executed accordingly. Information was submitted and an agreement negotiated with a large concern which had arranged to purchase the pulp mill formerly operated by the Nipigon Fibre Company at Nipigon village. Arrangements were perfected for serving this mill early in the coming year.

## OTTAWA SYSTEM

**Ottawa**—The power demand continues to increase at a rapid rate in this municipality. Early in the year an additional block of 2,000 horsepower was reserved for delivery in October, 1923. The municipality now holds in reserve nearly three-quarters of the total power available for it under agreement, and some attention is being given to the question of securing additional sources of power to meet future needs of the municipality.

**Nepean Rural Power District**—The number of consumers has shown a considerable increase during the year, and the amount of power used has been doubled. An additional power contract for 25 horsepower has been received. Extensions to the transmission lines were made to supply new customers.

## CENTRAL ONTARIO AND TRENT SYSTEM

During the year 1923, owing to comparatively quiet commercial conditions, there was no unusual increase in industrial load on the system. However, the normal growth of load, particularly in domestic lighting and other domestic uses, has absorbed the output of the new generating station at Ranney falls which was placed in operation in August, 1922.



Investigations have been made of the economic value of the various power sites on the Trent river, and on the basis of the largest amount of power available and the shortest distance of transmission, the sites at Dams eight and nine were chosen for immediate development. The developments will produce, jointly, approximately 10,000 horsepower, and are now under construction.

Other sites on the Trent river are of small capacity or remote from load centres, and the most economical method of producing further power from the Trent river is by means of storage works. Surveys and investigations carried on for the past two years have indicated that enlargement of the storage basins on the Crow river, which is tributary to the Trent river, offers the most economical means of storage of water in large volume. A dam has already been constructed at the foot of Kashabog lake in the Crow river watershed, and other works are projected.

**Belleville**—Estimates are in preparation for the work of changing the distribution voltage from 2,400 volts delta to 4,160/2,400 volts star. This work will involve extensive changes in the substation.

**Bowmanville**—The distribution voltage at Bowmanville was changed from 2,400 volts delta to 4,160/2,400 volts star. This change was carried out in order to meet the growing demands for power without making large capital expenditures on distribution copper.

**Brighton**—The Presqu'Île Park Summer Hotel Co. entered into a contract for electric service. It constructed approximately five miles of pole line to transmit the power purchased from Brighton to Presqu'Île Point. A canvass will be made next summer with the object of obtaining sufficient consumers to warrant the Hydro-Electric Power Commission taking over the line and supplying service to summer residents, as well as to the Hotel Company.

**Kingston**—Improvements in the local system were carried out. These included new feeder panels in the substation and larger copper in the feeders. The local commission is constructing an addition to its office building which will provide greatly improved office accommodations, and bring all departments to a common point.

**Lindsay**—The programme for the reconstruction of the distribution system in the southern section of the town was completed. A marked improvement in appearance and operation is noticeable.

**Napanee**—Estimates are in preparation for improved street lighting on King street and in front of the town hall.

**Oshawa**—The rapid growth of Oshawa has necessitated many extensions and betterments to the distribution system during the year. Alterations and improvements to the substation are contemplated, including the installation of additional feeders, and the laying of underground cables from switchboard to terminal poles.

**Peterborough**—The Peterborough Utilities Commission is completing the construction of a new substation. Power will be received at 44,000 volts and will be stepped down for distribution at 2,200 volts. Three 1,500-kv-a. transformers are being installed, and space is provided for future installations up to a total of 12,000-kv-a.

In order to supply 600-volt, direct-current power for the operation of the Peterborough Radial railway, and at the same time improve the power factor

of the Peterborough load, a synchronous motor-generator set is being installed in the new substation jointly by the local Commission and the Hydro-Electric Power Commission of Ontario. The synchronous motor has a capacity of 1,500-kv-a. and is direct-connected to a 500-kw., 600-volt, d-c. generator. The excess capacity of the synchronous motor will be used for the correction of power factor.

The 2,200-volt equipment in the substation includes both a main and an emergency bus.

Reconstruction of the distribution system has been continued during the year.

**Trenton**—The ornamental street lighting system was completed as described in the 1922 Annual Report. The resulting street illumination is entirely satisfactory.

**Tweed**—Extensive improvements have been made to the local distribution system.

**Warkworth**—The police village of Warkworth passed enabling and money by-laws and entered into a contract with the Commission. Construction was completed and lines were made alive in Warkworth on October 4. The police village trustees are considering an extension of the system to serve an area in the township which is practically part of the village.

**Whitby**—A valuation of the electric plant of the Public Utilities Commission was completed and the standard system of accounting installed.

## CENTRAL ONTARIO AND TRENT SYSTEM—RURAL

Estimated rates based on the provisions of the Hydro-Electric Distribution Act were, at the request of the municipalities, forwarded to the following townships: Darlington, Emily, Haldimand, Madoc, Otonabee, Percy and Verulam.

The Commission approved of rural power districts as follows: Bowmanville R.P.D., Trenton R.P.D.

The first three miles of the Kingston township system were completed in January, 1923.

An extension to the Kingston system to serve Westbrooke and Collins Bay was completed in September, 1923.

Construction of another two and one-half mile line in the Kingston district is proposed.

A rural line is proposed on the Kingston road west of Trenton and will be completed before December 31.

Contracts have been signed and construction will be completed this year for a mile of rural line west of Bowmanville.

An active canvass is going on in Haldimand and Cramahe townships adjacent to the village of Grafton.

## NIPISSING SYSTEM

Construction of a new development at Bingham Chute near Powassan was undertaken for supplying additional power to this system and it is expected that the first unit will be placed in operation early in the coming year. Plans were perfected for enlarging the capacity of the existing development and it is expected that larger units will be placed in operation at this development at

an early date. Arrangements were completed for serving the village of Powassan from the new development at Bingham Chute, the existing equipment in the Powassan substation being moved to the village of Callander. The distribution system in the town of North Bay was enlarged and extended to take care of the increased demands for electrical energy in that municipality.

## NEW ONTARIO DISTRICT

Assistance was rendered to certain municipalities in the northern portion of the Province which have not yet executed agreements with the Commission, but which requested advice concerning the possibilities of the development of local water powers, for the purpose of supplying their own power requirements. An investigation was made concerning the power possibilities of various sites, and the results of such, together with estimates of cost of development, were submitted. The streams considered in connection with this work were the Vermilion, Aux Sauble, French and St. Marys rivers. This work was performed for the municipalities of Capreol, Massey, Sault Sainte Marie, Sturgeon Falls and Sudbury.

## RURAL DISTRIBUTION

During the last few years, changes of a radical nature have been made both in methods of dealing with the distribution of rural power and in the legislation relating to this portion of the Commission's activities.

Under the Power Commission Act, as amended in 1911 and 1917, provision was made for township councils to secure estimates from the Commission, on the cost of distributing power to rural petitioners. Each township could issue debentures to cover the cost of any works required to supply any petitioners consenting to take service, and the township entered into agreement with the Commission for a power supply. Under this legislation, a small number of townships arranged to secure power from the Commission and a few localities obtained service in this manner.

While, in general, this scheme permitted a few to secure service in limited areas where the density of business was greater than the average, or in situations close to existing distribution lines, yet it did not permit the widespread extension of rural electrical service because the rates charged were less than would be necessary in order to serve larger areas of average density. Also this arrangement permitted each township to deal with its own requirements without taking into consideration the fact that, as a rule, geographical areas not conforming to the township boundaries could be more economically served from centres of electrical distribution or suitable available power centres.

As a consequence of the need for better legislative facilities in order to make power distribution in rural communities practicable, an amendment to the Power Commission Act was passed, to take effect from June 4, 1920. This amendment comprised the addition of Part II B, "Construction and Operation of Distribution Works in Rural Power Districts". Under this amendment the Commission may define areas wherein it will construct and operate works required to serve customers who contract with the townships for electric service. The townships included in these Rural Power Districts enter into contracts with the Commission and assume the liability for all expenditures made by the Commission in connection with the supply of electric service to consumers in the township.



The cost of transmitting and distributing small quantities of power in these rural power districts, where the distance between customers is great, necessitates rates which are considerably higher than the rates in urban centres, where the consumers are located close together. In order partially to meet this disparity in the cost an Act was passed, in 1921, providing for the granting, by the Provincial Government, of half the cost of all primary lines constructed by the Commission in the Rural Power Districts. The funds for such purposes are paid out of such money in the Provincial Treasury as is collected by the Government from water rentals.

During the early part of the period in which these changes were made, the Commission made extensive investigations to determine a satisfactory solution to the practical problems of distributing power in rural communities. One conclusion reached was that at least an average of three farmers per mile of line constructed must take electric service in order to make it economically feasible for farmers to take service and make these systems self-supporting, and a rule has been established making it necessary to secure the equivalent of three Class III rural contracts per mile of primary line constructed before a grant is requested from the Government. A classification of customers was established so as to distribute equitably the cost to users, and from estimates on average standard lines rates were set up for each class of user.

### RURAL EXTENSIONS

During the year, there were 216 miles of overhead primary line constructed and 21 miles of underground primary line, and arrangements have been completed to construct a large number of additional rural lines during the coming year.

The following tabulation shows, in detail, the extensions approved this year, the number of consumers, the capital, the amount of the bonus and the load taken:

Miles of line..... 225.14

#### Number of consumers

	Hamlet	Farm	
Niagara system.....	1,049	640	
Essex County system.....	85	....	
Severn system.....	231	13	
Eugenia system.....	5	....	
Wasdells system.....	74	43	
St. Lawrence system.....	10	2	
Ottawa system.....	7	4	
Central Ontario and Trent system.....	23	43	
Totals.....	1,484	745	2,229

Total capital approved for primary line extensions..... \$486,589.09

Amount of bonus approved by Order-in-Council..... \$147,796.82

#### Power supplied in rural districts to serve farm, hamlet and power customers

	Horsepower
Niagara system.....	3,174
Severn system.....	31
Eugenia system.....	10
Wasdells system.....	63
St. Lawrence system.....	77
Ottawa system.....	60
Central Ontario and Trent system.....	99
Total.....	3,514

New contracts were executed by 40 townships of which 28 are already being served. At the request of various township councils 69 meetings were held in different parts of the Province at which the question of rural power supply was discussed and explained in detail. At most of these meetings committees were appointed to pass on to those interested this information regarding distribution of power in rural districts, the uses that might be made of the power when it is available and general information regarding equipping the premises for light and power.

To date the Commission, under contracts, has built lines to serve consumers in the following townships:

**Niagara System:** Ancaster, Barton, Bertie, Beverly, Biddulph, Blandford, Blenheim, Bosanquet, Brantford, Burford, Caradoc, Chatham, Chingua-cousy, Clinton, Crowland, Delaware, Dereham, Dorchester North, Dorchester South, Dover East, Dumfries North, Dumfries South, Easthope North, Easthope South, Ekfrid, Etobicoke, Flamboro East, Grantham, Harwich, Hay, Howard, Humberstone, King, Lobo, London, Louth, Maidstone, Malahide, Markham, Middleton, Moore, Mosa, Niagara, Nissouri East, Nissouri West, Norwich North, Norwich South, Oakland, Orford, Oxford East, Oxford North, Oxford West, Raleigh, Rochester, Saltfleet, Sandwich East, Sandwich South, Sandwich West, Sarnia, Scarboro, Sombra, Southwold, Stamford, Stephen, Thorold, Tilbury East, Toronto, Townsend, Trafalgar, Usborne, Vaughan, Waterloo, Wellesley, Westminster, Willoughby, Wilmot, Woodhouse, Woolwich, Yarmouth, York, York North, Zorra East.

**Essex County System:** Anderdon, Gosfield South.

**Severn System:** Flos, Nottawasaga, Oro, Sunnidale, Tay.

**Eugenia System:** Artemesia, Bentinck, Brant, Derby, Kinloss.

**Wasdells System:** Brock, Eldon, Mariposa, Mara, Reach, Thorah.

**St. Lawrence System:** Augusta, Charlottenburg, Edwardsburg, Elizabethtown, Kenyon, Lancaster, Winchester.

**Ottawa System:** Nepean.

**Central Ontario and Trent System:** Darlington, Kingston, Murray, Pickering, Whitby, Whitby East.

Summaries of information relating to rural lines extensions, including expenditures and bonuses, are, for the townships just listed, presented below.

### SUMMARY OF RURAL LINE EXTENSIONS

(a) Operation previous to June 1, 1921.

(b) Approved by the Commission from June 1, 1921, to October 31, 1923.

#### Miles of primary lines

(a) .....	305.54	
(b) .....	753.05	
Total.....		1,058.59

#### Number of consumers

(a) Suburban.....	6,030	
Hamlet.....	1,087	
Farm.....	1,652	
		8,769
(b) Hamlet.....	3,071	
Farm.....	2,170	
		5,241
Total.....		14,010

Contracts not yet connected..... 2,098

#### Total rural capital expenditure approved to October 31, 1923

(a) .....	\$517,911.77	
(b) .....	1,607,113.35	
Total.....		\$2,125,024.12

#### Government bonus approved by Order-in-Council to October 31, 1923

(a) .....	\$154,651.90	
(b) .....	467,612.53	
Total.....		\$622,264.43

When contracts between the consumer and the township have been executed, users of power in townships are supplied with service under classifications as set out below. Following the classification a table is presented showing the class demands in horsepower, the estimated monthly consumption in kilowatt-hours and the estimated net annual service charge in a 25-cycle district.



### CLASSIFICATION OF SERVICES FOR RURAL DISTRICTS

**Class I:** Hamlet Service—Includes service in hamlets, where four or more customers are served from one transformer. This class excludes farmers and power users. Service is given under three sub-classes as follows:

**1-A:** Service to residences where the installation does not exceed six lighting outlets or twelve sockets. Use of appliances over 600 watts is not permitted under this class.

**1-B:** Service to residences with more than six lighting outlets or twelve sockets, and stores. Use of appliances over 750 watts permanently installed is not permitted under this class.

**1-C:** Service to residences with electric range or permanently installed appliances greater than 750 watts.

Special or Unusual loads will be treated specially.

**Class II-A:** House Lighting—Includes such contracts as residences which cannot be grouped as in Class I. This class excludes farmers and power users.

**Class II-B:** House Lighting—Includes lighting of buildings and power for miscellaneous small equipment and power for single-phase motor not exceeding 2-horsepower, or an electric range (range and motor not to be used simultaneously) on a small farm of 10 acres or less in fruit growing districts and 50 acres or less in mixed farming or dairy districts.

**Class III:** Light Farm Service—Includes lighting of farm buildings, power for miscellaneous small equipment, power for single-phase motors, not to exceed 3-horsepower demand, or electric range. Range and motors are not to be used simultaneously.

**Class IV:** Medium Single-Phase Farm Service—Includes lighting of farm buildings and power for miscellaneous small equipment, power for single-phase motors, up to 5-horsepower demand, or electric range. Range and motor are not to be used simultaneously.

**Class V:** Medium 3-Phase Farm Service—Includes lighting of farm buildings and power for miscellaneous small equipment, power for 3-phase motors, up to 5-horsepower demand, or electric range. Range and motor are not to be used simultaneously.

**Class VI:** Heavy Farm Service—Includes lighting of farm buildings and power for miscellaneous small equipment, power for motors up to 5-horsepower demand, and electric range, or 10-horsepower demand without electric range.

**Class VII:** Special Farm Service—Includes lighting of farm buildings, power for miscellaneous small equipment, power for 3-phase motors from 10- to 20-horsepower demand, and electric range.

**Class VIII:** Syndicate Outfits—Includes any of the foregoing classes which may join in the use of a syndicate outfit, provided the summation of their relative class demand ratings is equal to the kilowatt capacity of the syndicate.

### CLASS DEMANDS, ESTIMATED CLASS CONSUMPTION AND ESTIMATED SERVICE CHARGE IN 25-CYCLE SYSTEM RURAL POWER DISTRICTS

Class	Name	Class demand horsepower	Estimated monthly consumption kilowatt-hours	Estimated net annual service charge
				\$ c.
I	Hamlet Service {	a.....	$\frac{2}{3}$ 10	17.59
		b.....	1 15	20.50
		c.....	$2\frac{2}{3}$ 150	36.44
IIA	House Lighting.....	$1\frac{1}{2}$ 15		30.05
IIB	House Lighting.....	$2\frac{1}{2}$ 25		48.40
III	Light Farm Service.....	4 40		60.82
IV	Medium Single-Phase Farm Service..	$6\frac{2}{3}$ 70		66.94
V	Medium Three-Phase Farm Service..	$6\frac{2}{3}$ 70		84.50
VI	Heavy Farm Service.....	12 150		130.97
VII	Special Farm Service.....	20 300		354.14

**Note:**—The service charge in 60-cycle system districts is slightly lower.

## ASSISTANCE TO MUNICIPALITIES RESPECTING MERCHANDISING AND SALES PROMOTION

During the last fiscal year, the Commission has been serving many municipalities, both large and small, by purchasing for them supplies of various kinds required for construction work or in connection with the operation of the local systems. It has also purchased for the municipalities electrical appliances for resale to their customers.

The supplying by the Commission of material for construction and operation is confined generally to the smaller municipalities which lack the facilities which the Commission has for purchasing quickly and economically the right kind of material. The Commission keeps itself posted continuously on prices of all kinds of material required by all municipalities, and is able to give on short notice any information that municipalities may require respecting prices and delivery. The majority of the smaller municipalities take advantage of this service by requesting the Commission to purchase the material they require.

During the past year the Commission purchased for 261 municipalities material to the value of \$558,000.

Besides acting as a medium for the purchase of various kinds of material for municipalities on the Hydro systems, the Commission has been engaged in the marketing of the Hydro lamp. The Hydro lamp, it may be explained, is a lamp manufactured for the Commission under specifications designed by Commission engineers to meet the demands of the various Hydro municipalities for a high quality, long life, incandescent lamp. Through the medium of the various Hydro shops the lamp, under a long-life guarantee of 1,500 hours, is marketed to the public with considerable success. It has been established by laboratory test, and by actual use by consumers, that the Hydro lamp is being manufactured according to specifications and is fulfilling the guarantee of the long life claimed for it.

An advertising campaign was launched involving the distribution of newspaper cuts among the various Hydro shops to assist them in their newspaper advertising; the distribution of blotters advertising Hydro lamps among the various Hydro shops for further distribution to their customers; the introduction and the distribution to the important distributing centres of a counter display rack for displaying lamps of various sizes to prospective customers; and the preparation and distribution of satisfactory window transfers for advertising lamps.

These efforts which have been supplemented by advertising in the "Hydro Lamp", referred to below, should tend to increase materially the lamp business for the coming year.

To assist in keeping the Hydro lamp up to standard an inspector is maintained at the factory of the manufacturer, periodic checks are made by the Commission's laboratory engineer of factory methods and manufacturing data, and a certain percentage of lamps is forwarded to the laboratories for minute examination and life test. These precautions ensure a comparatively uniform product of high quality.

From laboratory tests which have been produced within the past six months practically every size of lamp manufactured for the Commission has more than fulfilled the specifications and if the present method of manufacturing can be maintained Hydro lamps should in a very short time become an important factor in the electrical merchandising field.

The Commission has also during the past year edited and produced a sales bulletin, "The Hydro Lamp", for distribution among the many Hydro consumers in the Province. The objects sought by the distribution of this bulletin are as follows:

1. To inform the Hydro consumers in a general way, about the Hydro-Electric Power Commission and its activities.
2. To explain to Hydro consumers the advantages to be gained by a full use of hydro-electrical energy in the home and in the factory.
3. To keep customers posted on important matters regarding the operation of the Hydro systems generally, and municipal systems in particular.

This bulletin is prepared and distributed to the various municipalities in the Province who are co-operating in this scheme of advertising and they make distribution of the individual pamphlets to their consumers, either with the monthly lighting bill, by mail, or by special delivery, to ensure the dispatch of one copy per month to each of their customers.

Commencing with a very small subscription list, the publication has reached a circulation of 230,000 copies per month, and this promises to increase materially during the next year. During the past year the number of copies distributed reached a total of 2,660,000, and it is estimated that this circulation has materially increased the use of hydro-electrical energy by various means in the homes of the Province.

A number of municipal officials, who are engaged in various capacities in the Hydro shops have received instructions in merchandising methods and also in accounting practices. A system of accounting has been devised to show separately the results of the operations of Hydro shops in the Province and has been installed in several municipalities and operated successfully. The first municipality in which the system was put into working order was Stratford, and during the past year instructions were given, and the system either partly or completely installed in the municipalities of Chatham, Collingwood, Galt, Kitchener, London, Midland, Niagara Falls, Peterboro, St. Thomas, Sarnia, Stamford Township, Walkerville and Windsor.

This system of accounting provides for the keeping of a separate set of books and permits the preparation of a separate balance sheet and operating report of the Hydro shop's operations either annually or periodically during the year. It provides also for keeping the records in sufficient detail to show the relation of expenses to turnover, and profit to turnover. It also shows whether or not a shop using the system is operating in a satisfactory manner, and whether or not it is conducting its affairs on a strictly commercial basis, by being self-sustaining and bearing its just share of operating expenses.

It is proposed during the coming year to extend the operation of this system of accounting to every municipality engaged in merchandising electrical appliances.



## SECTION IV

### HYDRAULIC ENGINEERING AND CONSTRUCTION

During the fiscal year, 1923, much work of a varied nature was carried out by the Hydraulic department. The work of installation of additional units in the Queenston power house, and dredging operations in the Welland river, continued throughout the year. Unit No. 5 was placed in operation and work on unit No. 6 was brought nearly to completion.

An extension of the Nipigon plant was started to supply additional power for the Thunder Bay system.

At Dams Nos. 8 and 9, on the Trent river, are two new developments, which are being made to increase the capacity of the Central Ontario and Trent system, while extensive surveys were carried out to determine the possibilities of creating additional storage reservoirs.

A further supply of power for the Nipissing system was developed during the year at Bingham Chute. It is expected that the first unit will be ready in the very near future. For the purpose of augmenting the flow for this development surveys of possible storage sites were carried on during the summer with a view to construction in the ensuing year.

Surveys and studies have also been made covering various problems, and many valuable data have been collected covering the power possibilities of the province.

In the following pages, more detailed information is given covering the foregoing and other activities of the Hydraulic department.

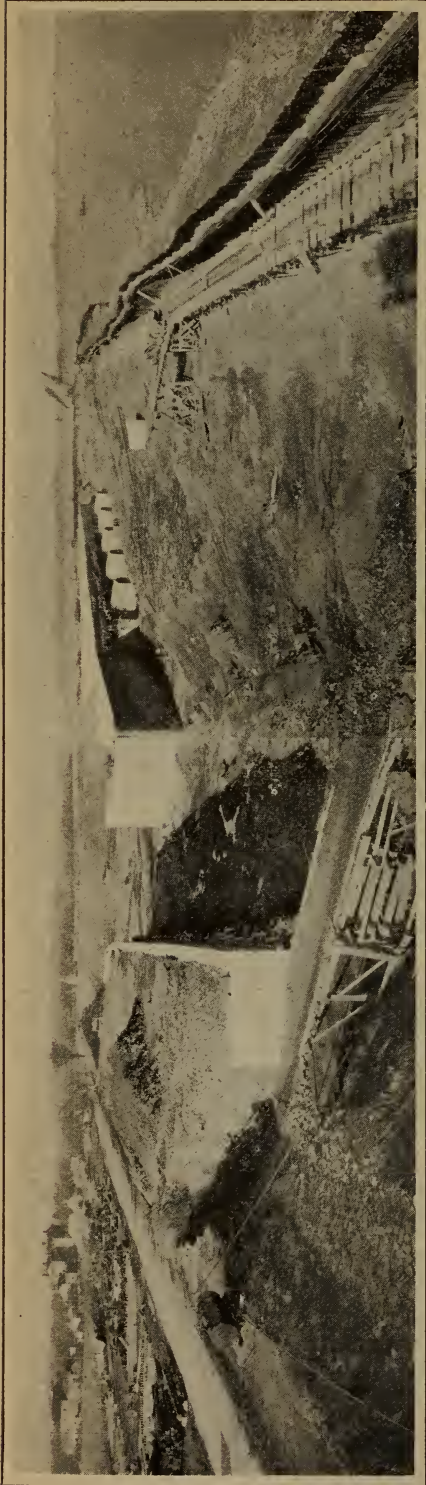
### NIAGARA SYSTEM

#### QUEENSTON-CHIPPAWA DEVELOPMENT

##### Hydraulic Construction

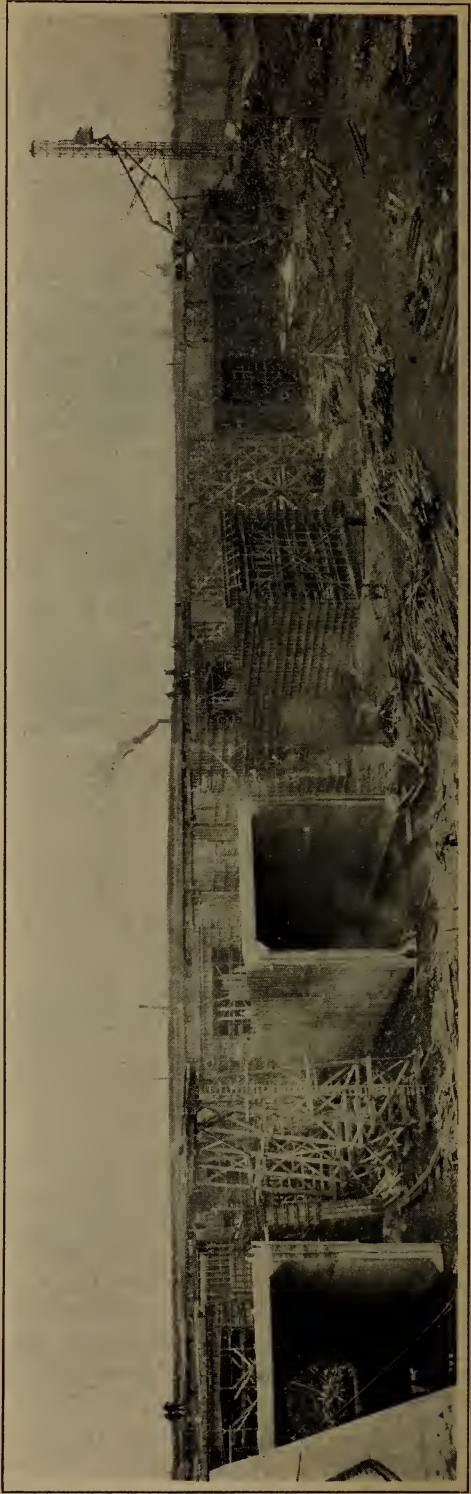
Up to the beginning of the fiscal year of 1922-1923, the attention of the Hydraulic department had been directed mainly to the operation of those works essential for the production of power to meet the ever-increasing demand. This included the prosecution of the initial programme to place in commercial operation the first five units at the power house, together with the enlargement of the channel of the Welland river and the upper section of the canal, to meet the resulting demand for sufficient water. For this purpose it was necessary to complete the rock section of the canal, the forebay and the first section of the power house.

During 1923, in addition to the extension of the power house for three additional units, the dredging programme was enlarged and considerable work was done for the protection of the earth banks of the canal.



QUEENSTON-CHIPPAWA POWER DEVELOPMENT

Intake structure. General view of outer side with portion of cofferdam at right. Note crane removing sheet piling from cofferdam in background and the Queen-Victoria Parkway at the left



QUEENSTON-CHIPPAWA POWER DEVELOPMENT

Intake structure. General view of inner side showing construction operations, November 2, 1922





#### QUEENSTON-CHIPPAWA POWER DEVELOPMENT

Intake structure. General view of inner side showing intake practically completed, December 4, 1922. Compare with lower photograph on page 76, taken one month earlier

By maintaining a reasonable schedule of construction it has been possible for the first time to do work beyond that essential for immediate needs, thus providing to some extent for ultimate requirements, particularly in respect to the safeguarding of the canal against possible future damage from earth and rock slides and other causes.

Arrangements have been carried over from the previous year in reference to the sale of used equipment, and a considerable portion of the materials and plant left over from the construction of the work has been disposed of satisfactorily.

In addition to ordinary engineering and construction activities, large demands were made on the time of the engineering and clerical staff in connection with matters under investigation by the Hydro-Electric Inquiry Commission; for this purpose voluminous statements and estimates were prepared by the Niagara and Toronto offices and duly submitted for transmission to the proper authorities.

The appropriation of a sum of money for investigations in respect to possible future development at Niagara Falls led to the detailing of a survey party to secure data in the field, which, combined with existing information, will be utilized as a basis for preliminary designs and estimates.

Some of these undertakings are in an advanced state of progress, but there yet remains a very considerable amount of work to be carried over into the coming year.

The Queenston-Chippawa development was operated throughout the winter months under somewhat exceptional conditions. The river and canal section in earth were only partially excavated, and this fact, together with the enforced use of a temporary intake at Chippawa without adequate ice protection, gave rise to considerable attention and anxiety on the part of the resident engineering staff.

#### Intake

On December 17, 1922, water was first admitted into the intake structure, following the completion of the excavation and concrete work required under "Operation No. 1" for the initial development for 275,000 horsepower.

This event marked the beginning of the end of operations which had extended intermittently over a period of more than four years.



The general design of the power scheme fixed the location of the intake at the junction of the Welland river with the Niagara river, and the earlier operations up to the summer of the year 1920 were directed mainly toward the excavation of the approach channel and the inner basin, which occupied an area of approximately twenty-eight acres; and to accomplish this purpose, half a million cubic yards of earth were removed by under-water dredging. During 1920 and 1921 the whole site was enclosed by a cofferdam, having a total length of twenty-eight hundred feet, requiring for its construction four thousand tons of steel sheet piling, half a million feet of timber and a correspondingly large quantity of earth filling.

This cofferdam formed three sides of an irregular quadrilateral, of which the west bank of the Niagara river formed the fourth, and was constructed of heavy clay from the river excavation, and strengthened and made watertight by interlocking sheet steel piling driven firmly into the river bed.

Advantage was taken of the presence of a small island at the junction of the two rivers which was incorporated as an integral portion of the cofferdam system. The integrity of the cofferdam was tested in the fall of 1921 by pumping out the water from within the enclosure. In the early spring of 1922, the site was again unwatered and at the same time a contract was awarded to Messrs. Tomlinson, McCaw & Macdonald, of Winnipeg, for the completion of the earth and rock excavation and the erection of those structures which were necessary to prepare the intake for initial service. The work in connection with this contract proceeded rapidly during the season of 1922, and, as forecast in last year's annual report, was completed, with the exception of the removal of the cofferdam, shortly before the end of the year.

The removal of the sheet piling core was actually commenced in November, and such sheeting as could be removed safely was withdrawn before water was admitted.

At the same time a contract for the removal of the earth portion of the dam was awarded to the C. S. Boone Dredging and Construction Company, Limited, of Toronto, who promptly commenced dredging operations.

The contractors for the intake structure, who were likewise responsible for the withdrawal of the sheet piling in the cofferdam, encountered so many delays and unforeseen difficulties that by the new year all expectation was abandoned of providing an adequate channel for satisfactory operation of the intake during the ensuing winter season.

By the time sufficient sheet piling had been removed from the cofferdam to give an opportunity for continuous dredging, the fleet lying in the Welland river was completely hemmed in by ice which every effort failed to dislodge. Consequently, suspension of dredging operations was forced until the middle of March. In the meantime the withdrawal of the sheet piling continued and the last pile was removed early in March.

Two months later, dredging operations had progressed sufficiently to provide a passage for the water from the Niagara river to the power house through the permanent intake structure, and in the month following the removal of the cofferdam was completed with the exception of a small portion which will later be taken out by the Commission's equipment.

Both the Niagara river and the Welland river are navigable streams, the latter forming a portion of the Welland Canal system. For this reason special provisions were required by the Federal Government in order to insure a safe passage from one river to the other. This resulted in the provision of a



#### QUEENSTON-CHIPPAWA POWER DEVELOPMENT

Intake structure. One of the diffuser openings from the inner side, auxiliary openings to right and left. With intake in operation these openings are entirely submerged



#### QUEENSTON-CHIPPAWA POWER DEVELOPMENT

Temporary intake, in use during the winter of 1922-1923. This channel, as shown, is protected against the admission of floating ice by a boom stretched across the entrance

structure more elaborate and more costly than would have been necessary for ice protection alone.

The complete design of the intake provides for its construction in two operations. The second operation, which remains for future construction, is to consist of six gathering pipes of large dimension extending beneath the river bed for a distance of about six hundred feet beyond the breast wall described below. These pipes or "fingers" will admit water from the lower strata of flow of the river at a velocity less than the velocity of the river current, and



materials in suspension in the river will, to a great extent, pass over the openings in the pipes and thus provide for entrance into the canal of water practically devoid of ice or other moving bodies. These pipes are to be constructed when it is found that the efficacy of the portion now built approaches the safety limit.

That portion of the intake designated as Operation No. 1, which has been completed and placed in use, consists of a large basin or forebay, a breast wall, wing walls and a ship channel. The breast wall, six hundred feet long, contains six principal openings and fifteen supplementary openings. The breast wall forms a curtain extending deeply into the water to prevent admission of floating timber and ice. The supplementary openings are intended to be used excepting during ice runs, at which times they may be shut off by stop gates, when all the water will be admitted through the principal openings or diffusers. These diffusers eventually will form the entrance ends of the gathering pipes, above described.

At the north end of the breast wall is built a wing wall connecting up with the river shore at Hog island, and at the south end there is a wing wall connecting with the wall forming one side of the ship channel. The ship channel is 80 feet in width and 30 feet in depth; the sides being built of concrete with recesses for lock gates, should such in future be necessary.

The basin in the rear of the breast wall and diffusers is triangular in form and has a depth of thirty feet. The earth slopes are protected with a heavy layer of broken rock neatly trimmed by hand. This basin at its downstream end gradually merges into the standard canalized river section.

It is hoped that means will be provided in the near future for the restoration of the grounds, adjacent to the structure, to a condition in keeping with the surrounding park lands.

#### **Ice Conditions**

From the commencement of power house operation in December, 1921, until the summer of 1923, all the water used passed through a temporary by-pass to the north of Hog island. This channel has been deepened and widened for the purpose, and served not only as a temporary intake but also as the sole channel for navigation between the Niagara and the Welland rivers. During the winter months a floating timber boom was stretched across the upstream end of this passage, and the boom, favourably situated in a location sheltered by the cofferdam to the south, constituted the only protection provided against entrance of ice for the short period during which it was to be used.

Although the plant at Queenston was operated throughout the winter without interruption from ice conditions, yet at certain times, especially after periods of snowfall on Lake Erie, large quantities of slush ice passed into the Welland river and the power canal. This ice was the most important factor in the thickening of the ice cover over practically the whole length of the waterway, which, while thin in most places, actually reached a maximum thickness of twenty feet a short distance inside the temporary intake.

The hazardous condition experienced during the winter months, described above, would of course be greatly augmented by the heavier flow of water caused by the yearly increment in power output, and demonstrated beyond doubt the necessity of the thorough ice protection works provided by the intake structure, the first portion of which is now in winter use for the first time.

#### **Canal**

The total distance between the intake head-wall and the power house tailrace is slightly less than thirteen miles. The intake basin and the lower





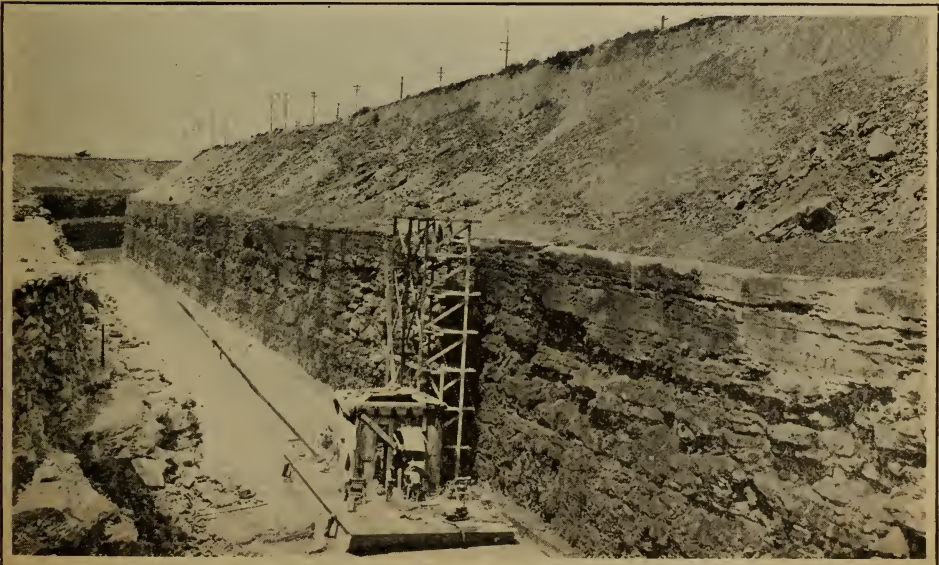
**QUEENSTON-CHIPPAWA POWER DEVELOPMENT**

Canalized river. Dredge "Stewart" making final cut on east bank. Looking south from M. C. R. bridge, Montrose, September 5, 1923



**QUEENSTON-CHIPPAWA POWER DEVELOPMENT**

Canalized river. End of pipe line discharging from dredge "Stewart" working in clay



**QUEENSTON-CHIPPAWA POWER DEVELOPMENT**

reach of the Welland river make up four miles of the total length, and the excavated canal and forebay eight and three-quarter miles; the remaining few hundred feet being taken up within the limits of the screenhouse, penstocks, transformer station and power house. The dredged earth section covers the upper five miles of the distance, embracing, in addition to the Welland river section, about a mile of the canal proper.

During the year 1921 and since that time, the methods applied to the removal of materials from the channel within these limits, although varying in character, might all be classified as dredging.

The first operation in connection with the enlargement of the Welland river section was placed under way in May, 1918. The equipment consisted of a cableway spanning the water, operated from two towers travelling on parallel tracks, one on each side of the river. A large grab bucket removed the material from the channel, depositing it on the bank. The machine continued to operate until July, 1921, subsequent to which date its services were no longer required. Later it was destroyed by fire.

The dipper dredge "Boone" during this period was employed intermittently on the excavation of the river section at Chippawa, and in the present year the contract for intake cofferdam removal, already referred to, was made to embrace certain excavation in the Welland river, adjacent to the intake. A small portion of this excavation was done in January, 1923, and was resumed about the first of June. About this time it was decided to extend digging operations with this equipment and a supplementary arrangement was made with the contractor, increasing his quantities to an amount which kept the fleet at work throughout the remainder of the season. This work was in its final stages at the close of the fiscal year.

When, in the fall of 1920, the date for putting the canal into operation was set for the year following, the suction dredge "Cyclone" was secured from the Board of Harbour Commissioners, Toronto, and excavated in the first nine months of 1921 a channel between the Welland river and the beginning of the rock section of the canal, thus providing sufficient capacity for the operation of two units at the power house.

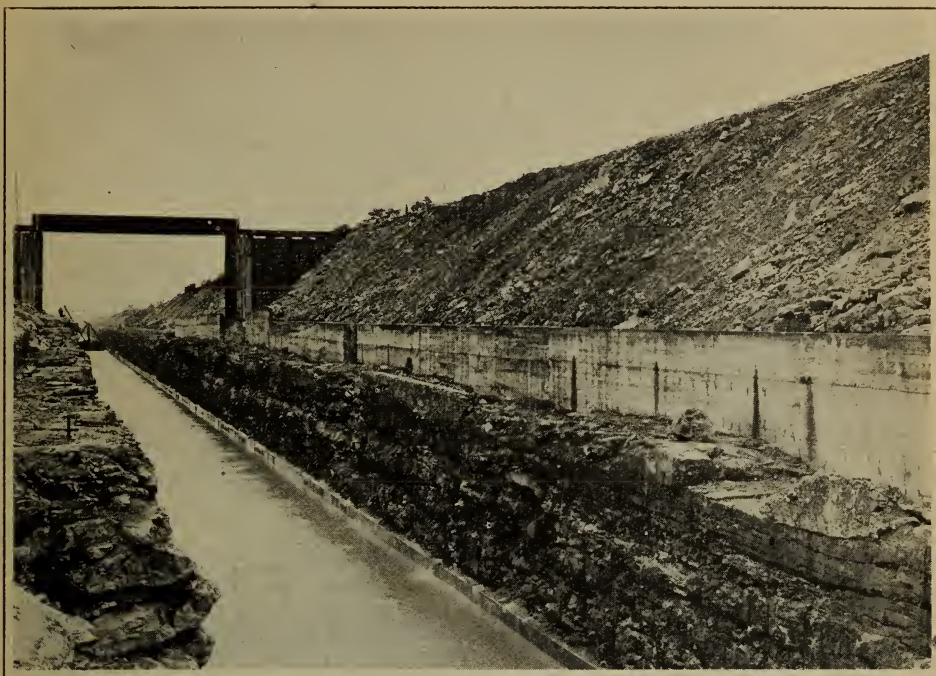
The earth core remaining between the channel thus formed and the section of canal which had been excavated by dry methods was removed under a contract made with John E. Russell, Toronto. This firm installed a small suction dredge, which operated during November and December, 1921, and January, 1922.

In the spring of 1922, a contract for further enlargement of the dredged earth section was awarded to E. O. Leahey and Company, Limited, of Ottawa. This contract was later extended and the scope of their operations now includes the removal of sufficient material to provide a channel in the Welland river and in the earth section of the canal, of sufficient waterway for the production of 500,000 horsepower at Queenston. The total quantity involved amounts to about 4,000,000 cubic yards.

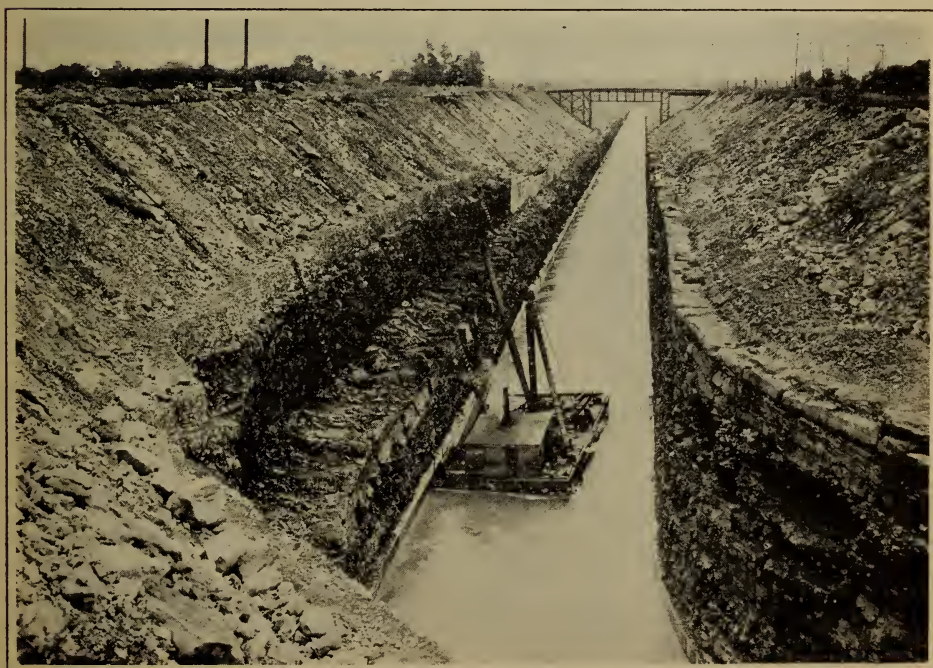
This firm has placed in commission the powerful electrically-driven suction dredge "Stewart" and a small steam dredge. The latter was not operated after December of last year, but was replaced in June by another steam-operated suction dredge of larger capacity.

The ice conditions during the past winter led to many unfortunate delays, and the restricted dimensions of some portions of the channel led to many shifts of the equipment which involved temporary losses in production; nevertheless the present rate of progress, with the two machines now operating, should warrant the completion of the contract within the coming year.





QUEENSTON-CHIPPAWA POWER DEVELOPMENT  
Canal. Showing concrete retaining walls



QUEENSTON-CHIPPAWA POWER DEVELOPMENT  
Canal. Scaler at work cleaning the rock surface preparatory to placing toe-wall



It is obvious from a consideration of the characteristics of the rock section of the canal that all of the work below the flow line must necessarily have been entirely completed prior to the admission of water in December, 1921.

During the following year a small construction force was maintained for the purpose of cleaning up along the line of the work and the salvaging of the materials and equipment which had been in use in scattered locations during the construction period. An efficient organization was thus at hand for the carrying out of certain improvements along the line of the canal.

A somewhat extensive programme was prepared for the year 1923, involving the scaling of loose rock from the upper portion of the walls of the canal; the supporting of undercut rock ledges with concrete; the cleaning of the rock surface at the edge of the vertical cut, and the construction of masonry or concrete toe walls along the berms for the purpose of stabilizing the sloping earth banks.

The vertical faces of the rock cutting in many places already showed signs of weathering, and in order to prevent further disintegration, a thin layer of cement mortar was applied over extensive areas by a pneumatic process.

Along the top of the earth banks, the ground was sloped back to ditches in the rear and from these ditches off-take channels of concrete were constructed at intervals down the faces of the slopes.

A start was made on the removal, by subaqueous dragging, of debris which had fallen from the sides to the bottom of the canal, but it was considered wise to postpone this operation pending completion of the improvements described above.

The amount of work of the various classes was found to be more extensive than originally anticipated, and consequently considerable work along this order will be carried forward into the following year, and upon completion the canal will be turned over to the Operating department.

It is now confidently expected that the completion of these undertakings will be reached by the close of the ensuing summer.

### **Bridges**

Further progress looking toward the ultimate completion of the canal has been made in the opening for traffic of three highway bridges.

The crossings at Lundy's Lane and Thorold road give access to the two provincial highways entering the city of Niagara Falls, while the new crossing at Portage road eliminates the undesirable detour heretofore existing on this important county thoroughfare. The bridge at Lundy's Lane was opened in December, 1922, and that at Thorold road in June of the following year, in time to take care of the heavy demand of the summer tourist traffic.

All three bridges are of similar design, with heavy concrete piers and abutments and steel superstructure with concrete paved roadway and sidewalks.

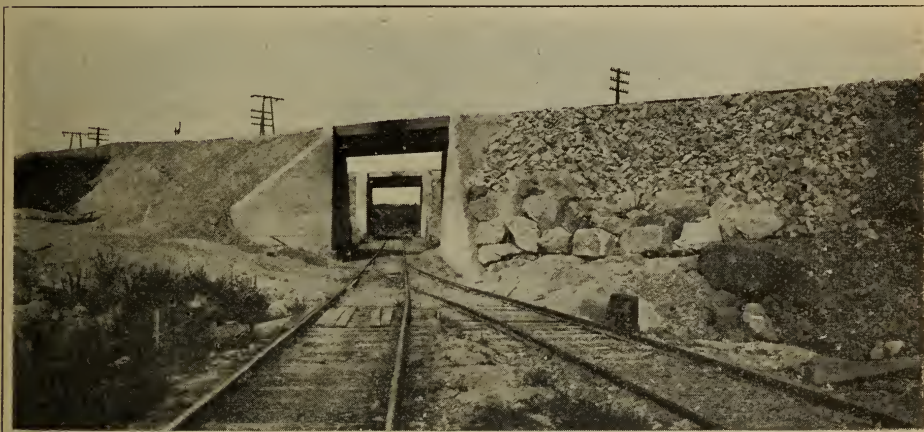
Later in the season these bridges were equipped with suitable lighting arrangements.

A permanent bridge of similar type at the crossing of Victoria street is now in the course of construction. This bridge will be open for traffic early in the spring of 1924.

During the summer months a large proportion of the traffic crossing these bridges comes from outside points and the unobstructed view, so readily obtained, of long sections of the canal in each direction undoubtedly creates a lasting impression on the minds of many of Ontario's transient visitors.



QUEENSTON-CHIPPAWA POWER DEVELOPMENT  
Canal. Typical permanent highway bridge over canal



QUEENSTON-CHIPPAWA POWER DEVELOPMENT  
Typical railway permanent grade separations



QUEENSTON-CHIPPAWA POWER DEVELOPMENT  
Canal. Side of canal before protection by toe-walls and concrete below rock surface



### **Construction Railway**

The decision relating to the retention of the canal construction railway as a permanent feature led to negotiations with the various railway companies in respect to the substitution of concrete and steel grade separation structures to replace temporary wooden trestles, which had been in use heretofore.

Suitable structures were designed accordingly and a contract let to Messrs. Campbell and Lattimore for the construction of abutment and bridge floors at the Grand Trunk main line; the Michigan Central; the Wabash; and the Niagara, St. Catharines and Toronto railways.

The Construction department of the Commission co-operated with the contractor on these works, not only in the supply of material and heavy plant but also in the fabrication of steel-work and in the extensive revisions in alignment of the main line tracks. Due to its special character, this latter work was done under rush conditions and frequently in inclement weather. All this work was carried out without interruption to traffic on the lines of the several railways affected.

The Commission now has a single-track railway line from Montrose to the forebay, a distance of nine miles, with permanent grade separation at all railway crossings and at two of the principal highways.

Interchange facilities are provided for with the main lines of the Grand Trunk; Michigan Central; Niagara, St. Catharines and Toronto railway, and indirectly also with the Wabash.

### **Screen House and Forebay**

The screen house foundations for nine units, together with the superstructure required for six units, containing the travelling crane, gates, racks and other equipment, had been practically completed in 1921, leaving some work to do in the way of interior and exterior finishing, and installation of fittings. This has been proceeding during the past year. A start has been made in extending the superstructure to enclose the headworks of the seventh and eighth units.

No permanent work has been required within the limits of the forebay; but the surrounding ground has been levelled off to some extent, preparatory to final improvements in landscape work, which are to be undertaken in the future.

To the north of the forebay, two large air compressors have been installed for use during construction, arrangements for water supply and fire protection improved, and some equipment added for the handling of sand to be used in power house extension work.

### **Escarpment Wall**

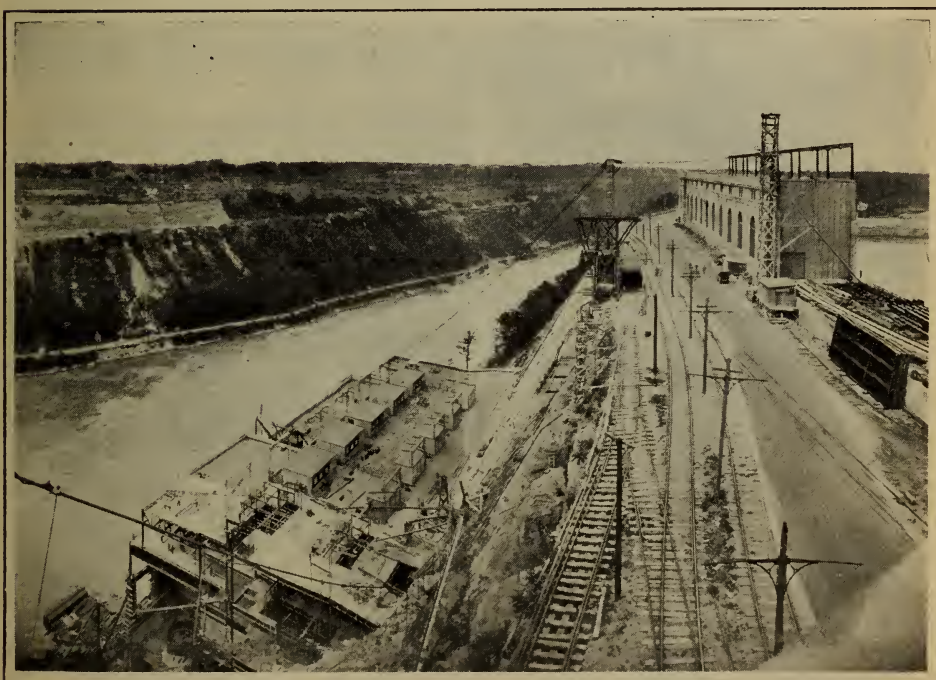
The concrete wall along the face of the escarpment was extended last winter as far as unit No. 6, to provide sufficient room for the final rearrangement of street railway tracks and the new boulevard to the east of the screen house. The wall is surmounted at intervals by the steel towers supporting the high-tension power lines, emanating from the power house. A sidewalk is provided along the outer edge, affording to pedestrians a safe and interesting view of the generating station below.

At the time of the turning on of unit No. 1 in December, 1921, it will be remembered that the only means of access to the power house, other than by

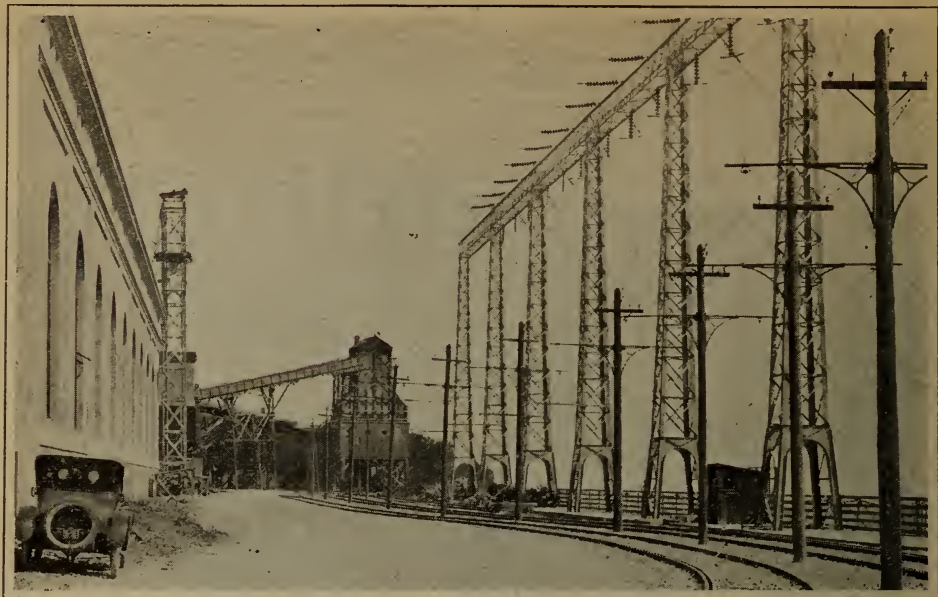




QUEENSTON-CHIPPAWA POWER DEVELOPMENT  
Forebay and west side of screen house with water in canal



QUEENSTON-CHIPPAWA POWER DEVELOPMENT  
General view of screen house, boulevard, escarpment and power house from top of mixer plant, October 4, 1923



**QUEENSTON-CHIPPAWA POWER DEVELOPMENT**

Top of the escarpment showing east side of screen house, Queen-Victoria Park boulevard, railway tracks and transmission line towers



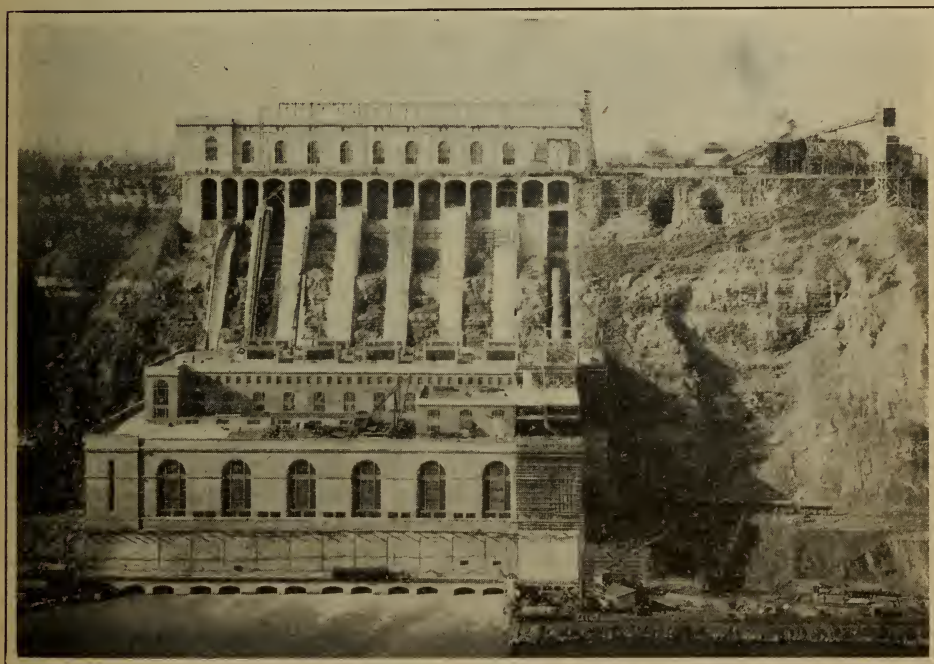
**QUEENSTON-CHIPPAWA POWER DEVELOPMENT**

Screen house. Interior looking north from top floor of Administration building





QUEENSTON-CHIPPAWA POWER DEVELOPMENT  
Administration building and screen house, November 8, 1923



QUEENSTON-CHIPPAWA POWER DEVELOPMENT  
Power house from United States side, October 27, 1923



flights of steps down the face of the escarpment, was by rail from the Suspension bridge at Queenston. The elevator shaft and tunnel, which now provide direct communication between the screen house and power house were then under construction. Some time was spent after the lining of the shaft had been completed, in installing the stairway and elevator equipment, but for the latter, it was still necessary to wait until the erection of the administration building, in which the upper entrance to the elevator shaft was to be housed, had progressed sufficiently for the setting of the operating machinery. This elevator was placed in service in December last.

The administration building, situated at the south end of the screen house, although not completed, now provides accommodation for offices, a garage and a stores entrance, and likewise contains the main entrance leading to the elevator serving the power house.

#### Power House

The structure below the escarpment top, appearing as a single unit of construction, has two entirely distinct functions to perform. The first function is the generation of electrical energy; the second, its transformation and distribution. A description of the generators, transformers, switching and other electrical equipment and those portions of the building which house this equipment will be found elsewhere in the Annual Report. The hydraulic machinery and equipment and what may be termed the substructure of the power house, which contains most of the hydraulic machinery, are more particularly dealt with in this section, and an endeavour is made to lay emphasis on the gradual extension of the installation to meet the continually growing demands for power.

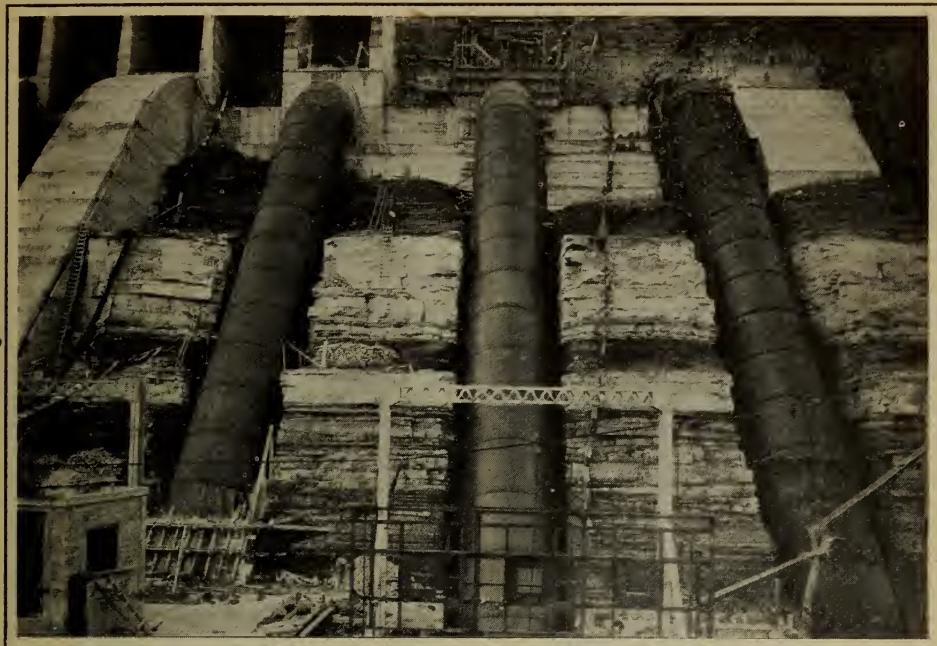
During the past year, work has been progressing very favourably at the power house in the extension of the building and the installation of additional units. A large force has been maintained continuously at this work and it has thus been possible to increase the production of the plant, by the addition of units Nos. 4 and 5, to a total nominal capacity of 275,000 horsepower.

Upon the introduction of unit No. 5 to commercial service in April last, the other units were one by one examined and such small repairs and adjustments effected as were necessary. All five units were again in service by September and ready to carry the increment of load usually demanded during the late fall.

It is fitting at this point to call attention to the vast amount of work which has to be done, and the skill required in planning and erecting the structure for housing the generating units and the subsidiary equipment. It is necessary for the operation of the plant to have installed numerous pumps for various uses, air compressors, filters, and long lines of piping for water, oil and compressed air. The building in of these systems, and other auxiliary services, required skill and careful attention and a large expenditure of time and labour, a fact which is apt to be overshadowed, so far as the general public is concerned, by the more spectacular operations in connection with the installation of the immense turbines and generators themselves.

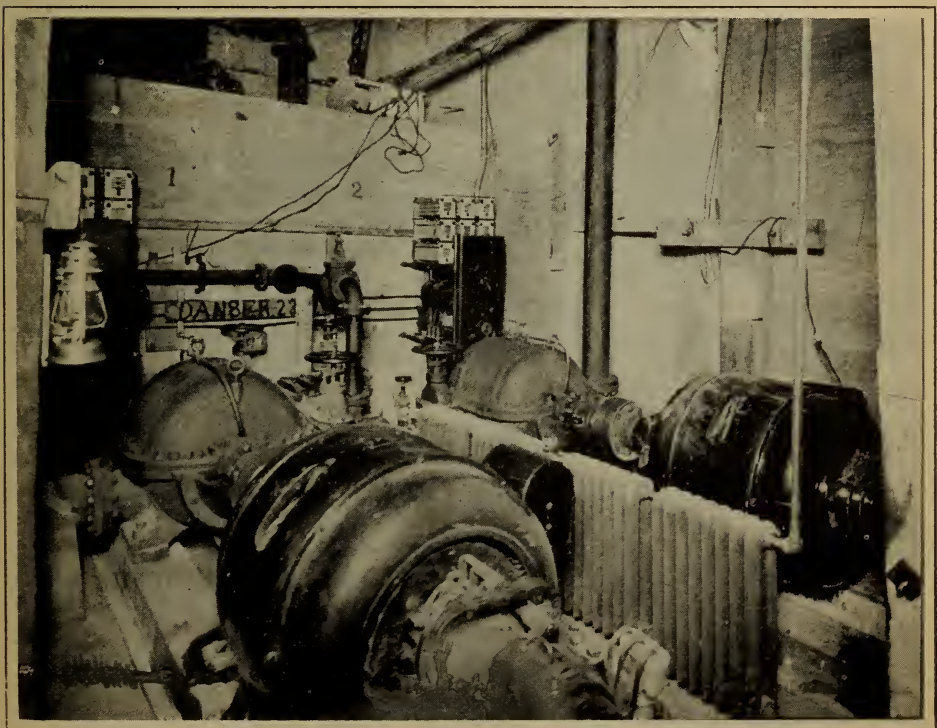
There yet remains a very considerable amount of detail work to be done in order to complete the power house for the initial installation of five units, which are now operating. This involves chiefly the laying of floor surfaces; the application of final coats of plastering and painting to large areas of walls and ceilings; metal work, and cleaning up.

The continually increasing demand for power on the system resulted in the decision early in 1923 to increase further the capacity of the plant, and



QUEENSTON-CHIPPAWA POWER DEVELOPMENT

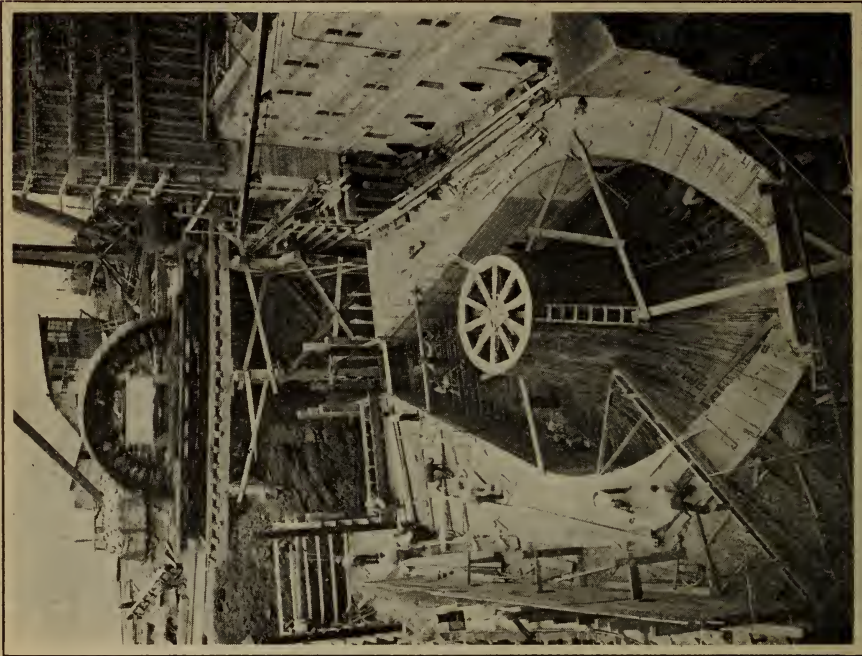
Penstocks for units Nos. 2, 3, 4 and 5 from roof of power house, September 12, 1922



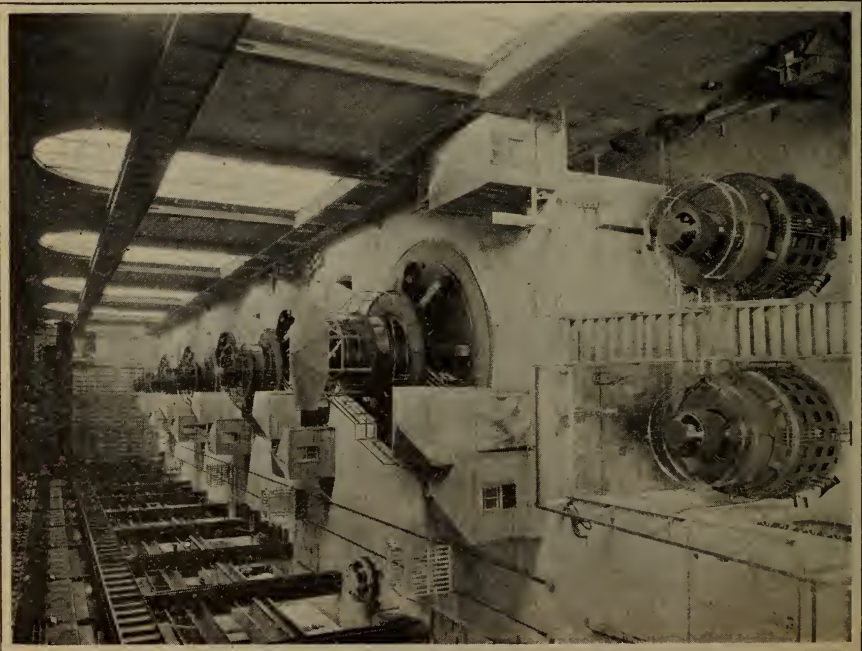
QUEENSTON-CHIPPAWA POWER DEVELOPMENT

Typical auxiliary equipment. Governor pressure pumps





QUEENSTON-CHIPPAWA POWER DEVELOPMENT  
Power house. Draft tube forms No. 7 unit, from rear, September 5, 1923



QUEENSTON-CHIPPAWA POWER DEVELOPMENT  
Power house, interior view, May 4, 1923



contracts are now under way for the construction of three additional units, the first of which is required for service by the beginning of 1924.

Contracts were accordingly awarded for the construction of penstocks for units Nos. 6, 7 and 8 to the Canadian Allis-Chalmers, Limited, and the William Cramp & Sons Ship & Engine Building Company, and the Dominion Engineering Works, for the more important hydraulic machinery required for these units.

The new turbines are to be of greater capacity than those of the original development, being rated at 58,000 horsepower.

By the end of October, 1923, the penstock and turbine for unit No. 6 were in course of erection in the power house and the draft tubes for units Nos. 7 and 8 installed.

The accompanying chart shows graphically the increase in capacity of the plant since the date of placing the first unit in commercial operation.

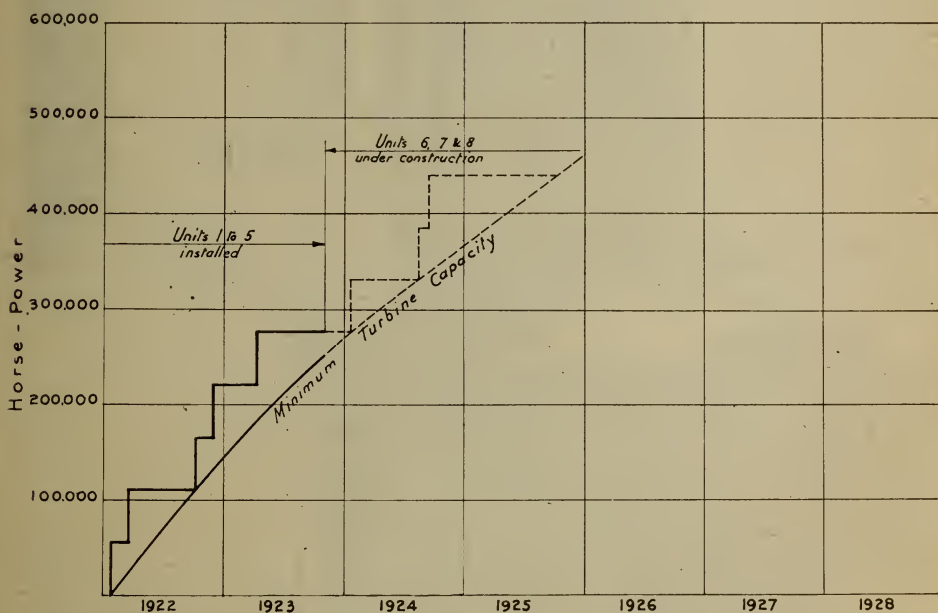


Chart of Turbine capacity of Queenston-Chippawa Development since beginning of operation

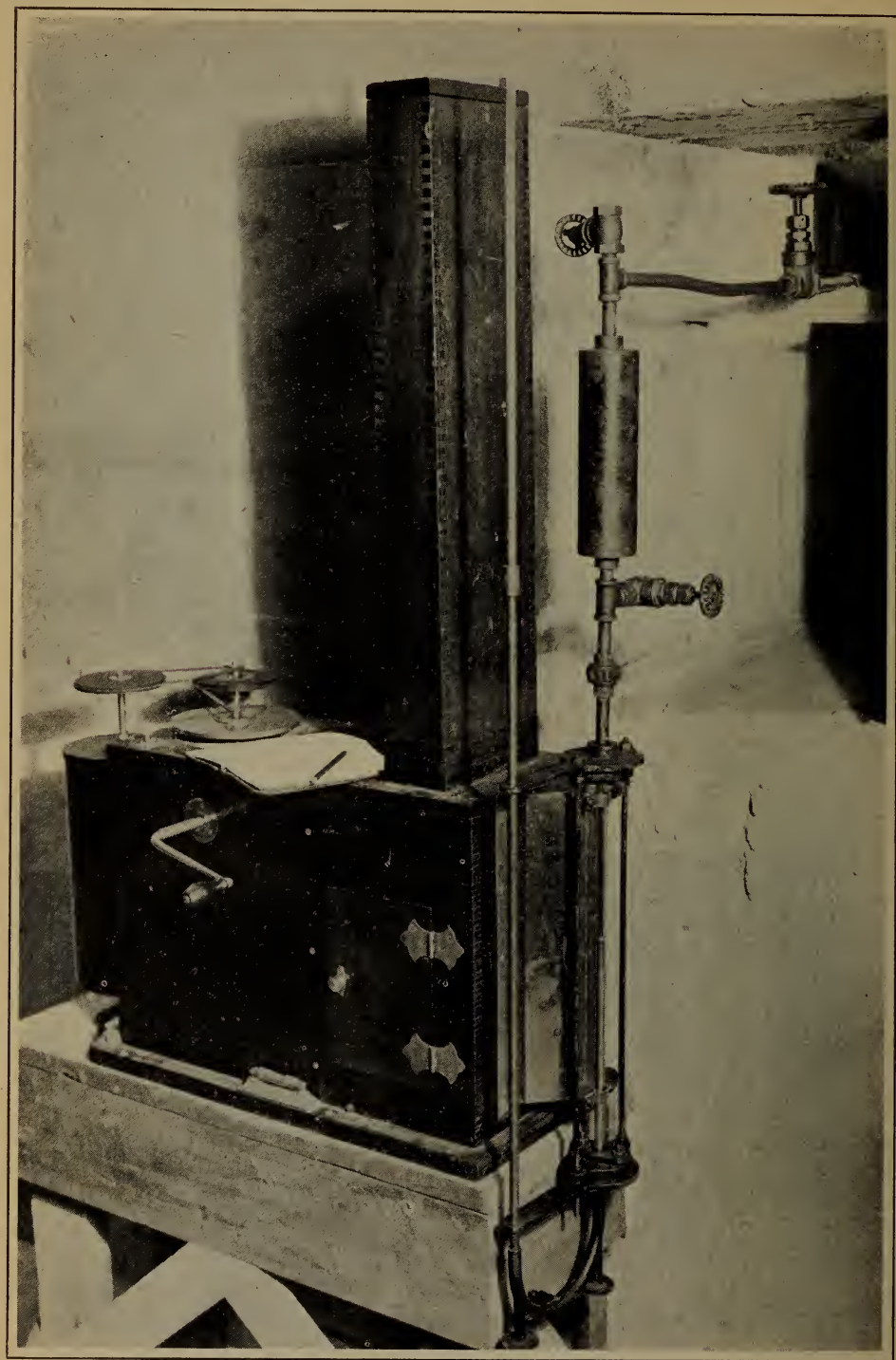
### Tests and Investigations

Efficiency tests of turbines Nos. 1, 3, 4 and 5, were made during the year, the Gibson Pressure-Time process being used for measurement of water.

This method was invented and patented by Mr. N. R. Gibson, of Niagara Falls, Ont., and the Commission purchased the right to use it in Ontario in its own plants. Its advantages are accuracy and speed, very little interference with the operating routine of the plant being necessary.

A view of the Gibson instrument as set up for test of unit No. 4 at Queenston is shown in an accompanying illustration.

This instrument makes a photographic record of the variation in pressure during shut-down of a unit from which the quantity of water being used before

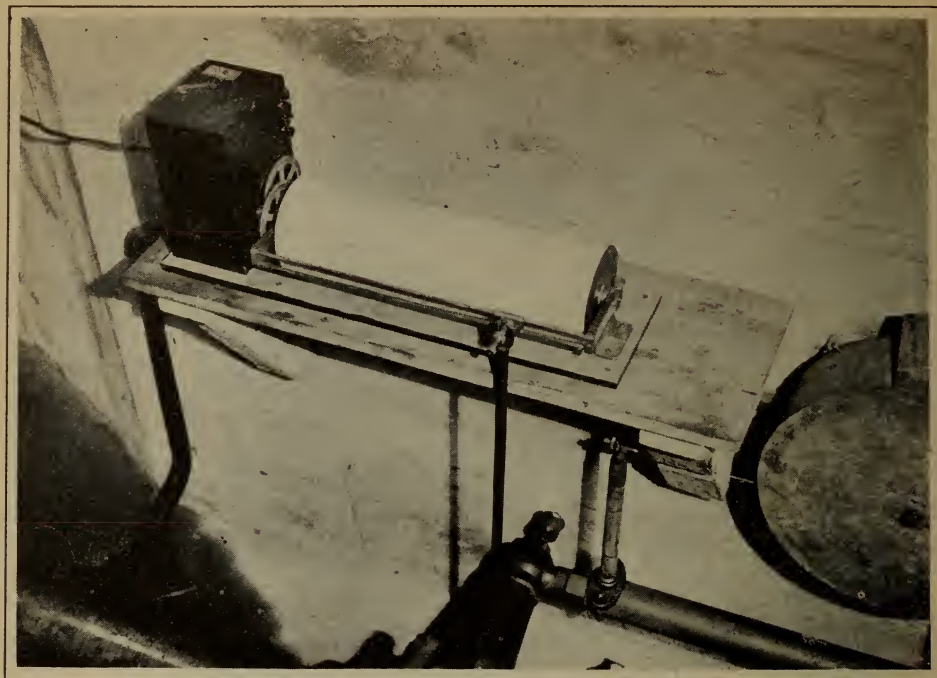


QUEENSTON-CHIPPAWA POWER DEVELOPMENT

Gibson apparatus for measurement of water, as set up for test of unit No. 4 at Queenston power house







#### QUEENSTON-CHIPPAWA POWER DEVELOPMENT

Servomotor indicator for accurate measurement of turbine gate opening and rate of closure at any instant during a test

In many of these investigations use was made of the servomotor indicator shown in accompanying illustration. This instrument was designed and built by members of the Commission's staff, and permits an accurate measurement to be made of turbine gate opening and rate of closure at any instant during a test.

Measurements have been made of the distribution of flow through the various openings at the intake at Chippawa and of variation in water levels there and near-by in the Niagara river. A permanent automatic gauge well and shelter is under construction at Slater's point, opposite Navy island, at which a continuous record of water level at that point in the Niagara river will be obtained. This gauge will serve as a key gauge for the whole upper river thus interrelating records of briefer duration obtained at other points.

#### Salvage

Considerable advance was made in the sale of stores and equipment which had been acquired during earlier years in order to secure the completion of the power house and canal within the time allotted for construction. The schedule of performance requiring the delivery of power by the fall of 1921, demanded that work be prosecuted at every location where access was possible. This naturally resulted in plant requirements of extraordinary magnitude, and the nature of the work was such that much of the heavier plant was of special character, a large part of which it was impossible to purchase because of its special nature and which had to be designed on the work and put together during the progress of the same.

Practically all of this plant was on hand until after the admission of water into the canal in December, 1921.

Plant depreciation during this period of construction has been consistently written into the cost of the work, with the result that the valuation on the books of this equipment had been reduced by this and other means to about 25 per cent of its original cost. Early in the following year, an internal selling organization was developed under the jurisdiction of the Plant engineer, and the activity of this department in nine months resulted in the disposal of about 25 per cent of the saleable construction equipment.

In March, 1923, the remaining plant not required for immediate use was placed for sale in the hands of the Hydro Salvage Syndicate, directed by two of the largest equipment houses operating in Canada.

The efforts of the latter organization during the past nine months have been productive of sales of an additional 15 per cent and there is every prospect of further developments in the near future. Since building operations on the extension of this development are still in progress there is a considerable part of the original plant still in use.

In the spring of 1923, a contract was entered into with the Eastern Wrecking Company for the sale to them of such temporary buildings as were released for disposal in this manner from time to time. This company has already demolished twenty-six buildings, chiefly bunk-houses and camp buildings.

Only such buildings as are not required for present or immediate future use have been sold under this arrangement.

#### **Township of Stamford Water Supply**

An agreement has been reached between the Commission and the township of Stamford in respect to the drying up of privately owned wells in the vicinity of the canal claimed to have been caused by the Commission's operations.

Under the settlement the township has been compensated in part for the cost of laying water mains through the more settled portion of the district referred to, and in addition, over one hundred claims have been disposed of individually, either by the drilling of new wells or by contributions in cash.

The well operated by the township authorities for general water supply was abandoned in 1921 due to reduction in flow, and an arrangement was made permitting them to install a temporary pumping station within the canal prism at Victoria street; the supply of water being obtained from an underground stream discharging into the canal through a rock seam above water level. This supply approximated in capacity the original well. Negotiations are now in progress toward the settlement of this final phase of this issue.

#### **Queen Victoria Parkway**

Access to the power house from Niagara Falls by way of Queenston has been greatly facilitated by the construction of a highway, connecting Niagara Falls with that village. This boulevard forms a part of the highway system of the Queen Victoria Niagara Falls Park Commission. The space between the screen house and the escarpment, which had previously been occupied only by the tracks of the International Railway, was widened sufficiently to provide room for the driveway. This boulevard, completed in the spring of the present year, has already attracted many visitors from outside points, and apart from its physical advantage, it will undoubtedly prove to be of considerable benefit in bringing the public into closer touch with Ontario Hydro-Electric undertakings.

## QUEENSTON-CHIPPAWA POWER DEVELOPMENT

## BIBLIOGRAPHY

No adequate description of the design and construction of the Queenston-Chippawa power development has yet been compiled and published as a single volume. For the purpose of reference, however, a bibliography enumerating the more important articles, papers, etc., dealing with and describing various features of this great undertaking is given herewith.

*Canadian Engineer*

June 20, 1918—Progress of Construction, Q.-C. Power Canal.

November 21, 1918—"Hydro's" Queenston-Generator Specifications.

August 28, 1919—Vol. 37, No. 9—Progress of Queenston-Chippawa Power Canal—Loading 8,500 cu. yds. in cars in 20 hours with one shovel.

September 16, 1920—Progress on Queenston-Chippawa Power Canal. Design of Queenston-Chippawa Power Canal—T. H. Hogg.

February 3, 1921—Hydraulic Turbines for Queenston-Chippawa Development. Two Wellman-Seaver-Morgan Turbines of 61,000 H.P. each.

December 4, 1921—Description of Queenston-Chippawa Powerhouse and Canal.

*Engineering World*

November 1, 1919—Vol. 15, No. 9—Queenston-Chippawa Power Development at Niagara Falls—Harry Gardner.

December 1, 1919—Vol. 15, No. 11—The Queenston-Chippawa Hydro-Electric Power Project—Harry Gardner.

*Contract Record*

June 25, 1919—High Efficiency of Queenston-Chippawa Power Development.

May 11, 1920—"Cyclone" Dredge put into operation.

January 18, 1922—Queenston-Chippawa Development—First Unit in Power Plant put in operation.

*Engineer*

October 31, 1919—Vol. 128, No. 3331—Queenston-Chippawa Power Plant operating under head of 305 feet and developing 300,000 H.P.

November 7, 1919—Vol. 128, No. 3332—Queenston-Chippawa Power Plant—Continuation of previous articles.

*Engineering*

July, 1922—Vol. 114, No. 2950—Queenston-Chippawa Power Development—Description of Turbines.

*Engineers and Engineering*

August, 1922—Vol. 39, No. 8—Queenston-Chippawa Power Development—Articles on General and Economic Features—by H. G. Acres and E. T. J. Brandon.

September, 1922—Vol. 39, No. 9—Queenston-Chippawa Power Development—Engineering Features for Installation of 550,000 H.P. Details of Waterway and Intake—T. H. Hogg.

*Power*

June 27, 1922—Vol. 55, No. 26—Queenston-Chippawa Power Development—Installation of Five Units—Concrete Lined Canal designed for Ultimate Capacity of 600,000 H.P.

July 11, 1922—Vol. 56, No. 2—55,000 H.P. Hydraulic Turbines—Frank H. Rogers.

August 22, 1922—Vol. 56, No. 8—Queenston-Chippawa Power Development—Headworks, Penstocks, Power House and Electrical Equipment.



*Engineering News-Record*

- October 31, 1918—Vol. 81, No. 18—Queenston-Chippawa Power Development—Report of Construction Work in Digging  $8\frac{1}{2}$  mile Canal around Falls.  
December 11 and December 18, 1919—Vol. 83, Nos. 21 and 22—Queenston-Chippawa Power Development—Excavation under way on Canal.  
January 19, 1922—Vol. 88, No. 3—Queenston-Chippawa Power Development. First Unit installed—Power Plant opened.  
April 3 and April 6, 1922—Vol. 88, Nos. 14 and 15, Concrete operations—Placing, Design and Testing—A. C. D. Blanchard and R. B. Young.

*Concrete*

- July, 1922—Vol. 21, No. 1—Quality Control of Concrete—R. B. Young.  
November, 1922—Vol. 21, No. 5—Concrete Lining of Power Canal—R. B. Young.  
April, 1923—Vol. 22, No. 4—Paving a 34-degree Slope with Concrete—A. C. D. Blanchard.

*Mine and Quarry*

- November, 1918—Vol. 11, No. 1—Queenston-Chippawa Power Development under Construction—Louis P. Black.

*Iron Age*

- December 2, 1920—Vol. 106, No. 23—Turbines for Niagara's High Head Plant.

*Earth Mover*

- September, 1918—Vol. 5, No. 7—Power Development at Niagara.

*The Excavating Engineer*

- December, 1920—Vol. 14, No. 10—Digging the Queenston-Chippawa Power Canal.

*Electrical Review*

- September 3, 1921—Vol. 19, No. 10—Electrical Shovels in Construction of Queenston-Chippawa Power Development.

*Electrical World*

- March 26, 1921—Vol. 77, No. 13—50,000 H.P. Wheels for 500,000 H.P. Plant—E. T. J. Brandon.  
June 24, 1922—Vol. 79, No. 25—Arrangement for Handling 500,000 K.W. Load from Queenston Plant—E. T. J. Brandon.

*American Institute of Electrical Engineers Journal*

- June, 1922—Vol. 41, No. 6—Description of 45,000 K.V.A. Queenston Generators—B. L. Barns and F. Bowness.  
July, 1922—Vol. 41, No. 7—General Description of Entire Development on Canadian side of River—F. A. Gaby.  
September, 1922—Vol. 41, No. 9—Design of Armature Winch, Upper Bracket and Rotary Spider.

*Electrical Journal*

- August, 1922—Vol. 19, No. 8—General Description of Turbines, Generators and Switching Equipment—F. A. Gaby, F. H. Rogers, H. V. Hart and L. B. Chubbuck.

*Power-House*

- January 20, 1921—Vol. 14, No. 2—The Hydraulic Turbines for Niagara Falls.

*Power Plant Engineer*

- August 1, 1922—Vol. 46, No. 15—General Description of Queenston-Chippawa Development including Generators, Units and Accessories.

*Electrical News*

- February 15, March 1 and March 15, April 1 and May 1, 1922—Vol. 31, Nos. 4, 5, 6, 7 and 9—Location of Intake, Canal and Power-House, Hydraulic Installation and Canal Construction.

*Mechanical Engineer*

- July, 1923—Vol. 45, No. 7—Present and Projected Development of Ontario Hydro-Electric Power, with particulars regarding Queenston-Chippawa Installation.

*Canadian Chemical and Metallurgical Journal*

May 19, 1922—Vol. 6, No. 5—Details of 45,000 K.V.A. A.C. Generators.

*Genie Civil*

January 20, 1923—Vol. 82, No. 3—La Nouvelle usine hydro-electrique du Niagara à Queenston (Canada)—Description of Machinery and Equipment of Power Station.

*Hydro-Electric Power Commission Publications*

December 28, 1921—Official Opening of Queenston-Chippawa Power Development. Hydro-Electric Power in the Niagara District, Province of Ontario.

## The Bulletin:

September, 1920—Vol. 7, No. 7—Permanent Electrical Features—Queenston-Chippawa Development—E. T. J. Brandon.

October, 1920—Vol. 7, No. 8—

The Design of the Queenston-Chippawa Power Canal—T. H. Hogg.

Hydraulic Installation of the Queenston Chippawa Power Development—M. V. Sauer.

The General and Economic Features of the Queenston-Chippawa Power Development.

May, June, 1921—Vol. 8, No. 3—

Progress on Queenston-Chippawa Power Development.

January, 1922—Vol. 9, No. 1—Official Opening of the Queenston-Chippawa Power Development.

*Journal of the Engineering Institute of Canada*

September, 1920—Vol. 3, No. 9—

The Design of the Queenston-Chippawa Power Development—T. H. Hogg.

Hydraulic Installation of the Queenston-Chippawa Power Development—M. V. Sauer.

The General and Economic Features of the Queenston-Chippawa Power Development—H. G. Acres.

Electrical Features of the Queenston-Chippawa Power Development—E. T. J. Brandon.

**Address of Publications:**

*Canadian Engineer*, Court and Church Streets, Toronto, Ont.

*Engineering World*, 53 W. Jackson Boulevard, 542-553 Monadnock Block, Chicago, Ill., U.S.A.

*Contract Record*, 347 Adelaide Street West, Toronto, Ont.

*Engineering*, 35 Bedford Street, Strand, London, W.C. 2, England.

*Power*, McGraw-Hill Publishing Company, Tenth Avenue at 36th Street, New York, N.Y., U.S.A.

*Engineering News-Record*, McGraw-Hill Publishing Company, Tenth Avenue at 36th Street, New York, N.Y., U.S.A.

*Concrete*, Concrete-Cement Age Publishing Co., 1807 East Grand Boulevard, Detroit, Mich., U.S.A.

*Iron Age*, Iron Age Publishing Company, 239 West 39th St., New York, N.Y., U.S.A.

*Earth Mover*, The Earth Mover Publishing Company; Aurora, Ill., U.S.A.

*Excavating Engineer*, The Excavating Engineer Publishing Co., South Milwaukee, U.S.A.

*Electrical Review* and *Electrical World*, McGraw-Hill Publishing Company, Tenth Avenue at 36th Street, New York, N.Y., U.S.A.

*American Institute of Electrical Engineers*, 33 West 39th Street, New York, N.Y., U.S.A.

*Electrical Journal*, 1205 Keeman Building, Pittsburg, Pa., U.S.A.

*Power-House*, MacLean Publishing Company, 347 Adelaide St. West, Toronto, Ontario.

*Electrical News*, MacLean Publishing Company, 347 Adelaide St. West, Toronto, Ontario.

*Mechanical Engineer*, American Society of Mechanical Engineers, 207 Church Street, Easton, Penna., U.S.A.

*Hydro-Electric Power Commission*, 190 University Avenue, Toronto, Ontario.

*Journal, Engineering Institute of Canada*, 176 Mansfield Street, Montreal, Que.

## **SEVERN SYSTEM**

### **Severn River Storage and Regulation**

Investigations of storage on the Black river, tributary to the two plants on the Severn river, were made, and information secured concerning them. These investigations were made in co-operation with engineers in the Operating department and with the Orillia Light, Water and Power Commission. The reservoirs concerned were created for log driving purposes and are not now in use. Operation of this storage has been undertaken with a view to determine its value for power production.

Operation of the storage of lakes Simcoe and Couchiching is controlled at Washago by the Department of Railways and Canals. Demands of navigation, agriculture and power developments at the outlets of lake Couchiching, and the difficulties in disposing of the water from the lake at certain stages impose limitations to the use for flow regulation of the large volume of water held on these lakes. Between certain limits, however, storage from the lakes produced, during the year, a considerable increase in flow above the natural run-off.

## **MUSKOKA SYSTEM**

### **Muskoka River Investigations**

Investigations have been made and studies continued respecting the regulation of the flow of the South Muskoka river. The provincial Public Works Department has provided additional storage on the upper part of this drainage basin, which storage will assist in the regulation of the river for power as well as for navigation and log driving.

Studies were continued and plans made in connection with the contemplated increase in the capacity of the South Falls generating station. This work is now in such shape that active construction operations can be commenced without delay.

## **ST. LAWRENCE SYSTEM**

### **St. Lawrence River Investigations**

During the year further studies were carried out in connection with the development of power on the St. Lawrence river.

Early in 1923, ice formations set up abnormal disturbances to the flow and regimen of the stream, and advantage was taken of this opportunity for the collection of data concerning the flow. This action resulted in the securing of valuable information. On January 12, an ice bridge was built up at the foot of Croil island, which was blown out the next day. On January 19, another formed about the same place and built back in a few days to Farran's Point, and by the end of the month all that stretch of the river from below Woodlands



to Weaver's Point was covered with ice, which was gradually but continuously increasing in mass from the various forms of ice contributed by the passing flow.

It was evident that very exceptional results from this unusual blocking of the river would be produced. A party was organized and assigned to the work of collecting all possible data. It was April 17 before the river again reached a state that might be termed normal. The disturbed conditions existed for a much longer time than was the case in other similar occurrences and consequently gave a better opportunity for making observations.

Specially selected points at which water surface elevations were to be taken supplemented the regular gauge stations. By means of these the ever-changing disposition of ice and water was followed throughout the period. The information secured has been tabulated and graphically recorded.

Similar ice phenomena were experienced in the years 1887 and 1905, with the same interval of eighteen years between. The two earlier occasions were, however, of short duration compared to the one of this year.

The municipal power plant of the town of Morrisburg operated with a much reduced head, but was not completely shut down except for a very small part of the time. Though no considerable damage at any one place was suffered, there was a large number of small losses to boathouses and similar structures at the river's edge. All forms of ice contributed to the trouble but it is believed that greater control of the river will result in the elimination of most of it.

## RIDEAU SYSTEM

### Mississippi River Investigations

During the year a survey was made of a privately-owned power site known as Ragged rapids on the Mississippi river about ten miles above the site of the High Falls development.

The estimated dependable regulated flow at the site is the same as at High Falls, or 264 cubic feet per second. At 80 per cent efficiency, the turbine output would be 24 horsepower per foot of head. The maximum head that can be secured will be 120 feet, producing 2,680 continuous horsepower. Estimates are being completed of the probable costs of obtaining the maximum or a lesser head, and the costs of power therefrom.

The storage works controlled by the Mississippi River Improvement Company are situated above the site of Ragged rapids.

The Rideau system pays fifty per cent of the tolls collected by the Mississippi River Improvement Company. This company has a charter and legislation authorizing it to maintain storage works for the regulation of the flow of the river, and to collect tolls for the same from power owners benefited. Close touch is kept with the company and with the storage conditions existing from time to time. With the assistance of officials of the Improvement company, investigations and reports have been made in regard to the storage and flow regulation of the river. The plant owned by the Hydro-Electric Power Commission at Carleton Place has, by means of the dam controlling the elevation of Mississippi lake, been able to assist in the regulation of the flow to power plants below.

## **THUNDER BAY SYSTEM**

### **Nipigon Development**

Early in the year, the rapid growth of demand upon the system made it imperative that immediate steps be taken to increase the generating capacity.

This rapid increase in demand had in a measure been planned for by constructing the substructure and tailrace for the full capacity of the power site at the time of the installation of the first two units—each of 12,500 horsepower—which have been in operation since December 21, 1920. This provision made it comparatively simple to increase the capacity of the plant in the shortest possible time. The construction work necessary for the installation of two more units of the same capacity began in September of 1923. All of the construction work is being done by staffs provided by the Commission. The supplying and installation of turbines is by contract with the Canadian Allis-Chalmers, Limited. At the end of the fiscal year such progress had been made that concrete had been poured for the substructure of No. 3 unit, and it is fully expected that by July, 1924, this unit will be carrying commercial load, with No. 4 closely following.

### **Nipigon River Investigations**

Information concerning the flow of the Nipigon river and the fluctuation of the surface of lake Nipigon is being collected for the purpose of providing data upon which to determine the maximum power output of the fully regulated stream. It is anticipated that the large volume of water that can be stored on the lake will permit a complete regulation of the flow.

## **CENTRAL ONTARIO AND TRENT SYSTEM**

### **Dam No. 8 Development**

To meet the ever-increasing demand for power on the Central Ontario and Trent system, the construction of further developments became a necessity, and early in the summer of 1923 tenders were called for, for the construction of the Dam No. 8 development on the Trent river, and for the supplying of hydraulic equipment. The contract for the former was awarded to the Sinclair Construction Company, of Toronto, and for the latter to the Canadian Allis-Chalmers, Limited.

The development at Dam No. 8 consists of three 2,200-horsepower, vertical units, direct-connected to three three-phase vertical alternating-current generators on the main floor of the station. The tailrace will be a solid rock cut 33 feet wide by 18 feet deep by 3,250 feet long, involving a total excavation of 90,000 cubic yards, of which 500 lineal feet or 11,000 cubic yards have been excavated to date. Surplus and flood waters are diverted through the westerly sluices of Dam No. 8 across Meyers island to the west branch of the Trent river. Provision for this diversion necessitated the construction of a gravity section concrete wing wall 165 feet long, a rock-filled timber crib 8 feet by 10 feet by 350 feet long, and a rock-fill of trapezoidal section 750 feet long. At the end of the fiscal year considerable progress had been made on the excavation of the tailrace, and the power house site was in a condition to permit the pouring of concrete at an early date. Many of the turbine parts had been completed in the shops, and delivery of the embedded parts is anticipated in time for their incorporation in the substructure. It is expected that this plant, which will have a capacity of 6,600 horsepower, will be ready for operation early in 1924.



### **Dam No. 9 Development**

In order that the excavation of the tailrace for this development may be done "in the dry", it is necessary that it be completed before the development at Dam No. 8, situated immediately below it on the Trent river, is placed in operation. To this end, plans and specifications were prepared and tenders called for. The Lumsden Engineering and Transport Company has been awarded the contract, and is assembling plant and making preparations to commence active operations immediately. Power house construction will commence early in 1924, and the plant is expected to be completed by the end of the year.

### **Ranney Falls Generating Station, Dam No. 10**

The late summer and fall of 1922 marked the initial operation of the Ranney falls generating station, construction of which began in June, 1920. In October, 1923, efficiency tests were run on the two 5,000-horsepower units in this plant.

Coincident with this work minor adjustments were made on the auxiliary equipment in the plant and a start was made to clean up the power site. Completion of the latter work has been deferred until the temporary construction buildings are to be taken down.

### **Campbellford Pulp Mill Water Supply**

The diversion of water for the operation of the Ranney Falls station, through the upper reaches above Locks 11 and 12, resulted in cutting off the water supply as originally provided for the pulp mill. Accordingly estimates were prepared and appropriations made to install a suitable screened intake and 16-inch water main from canal to pulp mill, a distance of 1,150 feet. A new pump house was also put in between the grinder and machine rooms of the pulp plant, the installation consisting of two 25-horsepower motors direct-connected to two 750-gallon Watson-Stillman pumps. These units will provide ample water pressure for present and future requirements. The appropriation of \$14,000 for this work was sufficient to entirely cover the construction cost, notwithstanding the fact that construction was carried on under very adverse weather conditions.

### **Trent River**

The rapidly increasing demand for power in the district served by the Central Ontario and Trent system has made necessary, besides the construction of power plants, further investigations of the means of regulating the flow of the Trent river by storage reservoirs.

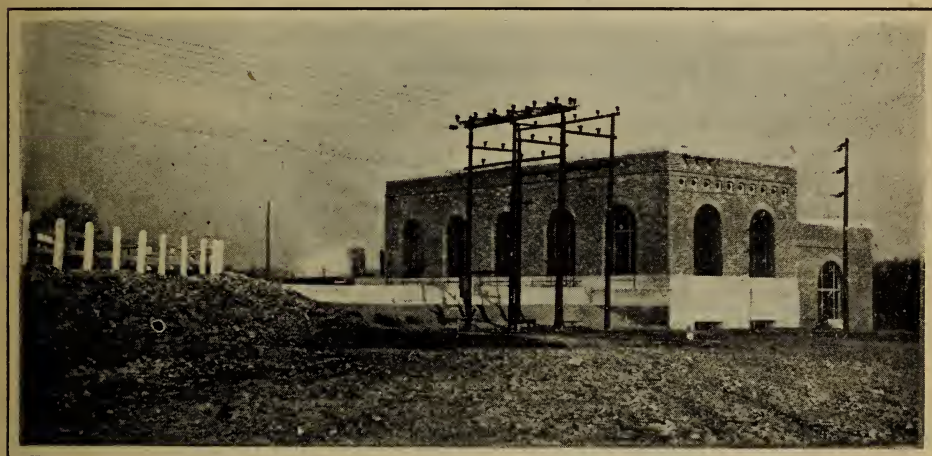
The Trent river, being a canalized stream, and also one on which a certain amount of log driving still occurs, presents problems in respect to power development and operation not generally met with on other streams.

The storage provided by the Department of Railways and Canals may be considered under two classes: first, the storage in the reservoirs which are used for actual navigation and are a primary part of the canal, and second, the storage held in reservoirs on tributary streams. The first class of storage has definite limits beyond which it is not possible to obtain assistance for flow regulation and at the same time to preserve, with the factor of safety imposed, the levels desired for navigation. Within these limits, definite aid in the production of power from this storage is received. The second class of storage on the





TRENT RIVER—DAM NO. 8 DEVELOPMENT  
Tailrace looking south, December 19, 1923



RANNEY FALLS POWER DEVELOPMENT  
General view of power house looking north from highway



BINGHAM CHUTE POWER DEVELOPMENT  
Main dam, September 22, 1923

tributary streams will be that from which any future increase in the regulation of flow will be provided. In order to determine what may thus be secured, attention has been directed to the study of these streams, and chiefly to the Crow river basin.

The Crow river discharges into the Trent river below Heely falls and at an elevation of the Trent river 282 feet above lake Ontario. Of this drop on the Trent river, 186 feet is, or will be, operated by the Commission, and 50 feet is now operated by other hydraulic plants. The total drainage area of the Crow river is 760 square miles, of which 460 square miles is tributary above the outlet of Belmont lake. The concentration of any possible storage at the lowest reservoir in the basin is desirable, and for this reason the investigations were directed with the object of determining the greatest amount of storage that could be provided by the construction of a dam at the outlet of Belmont lake.

Some preliminary information had been secured in previous years, but in January, 1923, a field party for the securing of the topography, and another small party for the securing of data regarding the variation and distribution of flow in the basin, commenced work. At the same time the assembly of all pertinent information from other sources was carried on.

This work is now reaching completion, and the economical limits of storage that can be secured will be determined and estimates of probable costs will be made.

The Hydraulic department maintains a resident engineer at Peterborough, who has had the immediate direction of the storage investigations, in addition to the progressive compilation and study of the hydraulic features of power from the Trent canal.

## NIPISSING SYSTEM

### **Bingham Chute Development**

A further and much needed supply of power for the Nipissing system will be available in the very near future from the development now nearing completion at Bingham Chute. Work on this project was started in the spring of 1923, and the first unit is expected to be ready for service by December 1, 1923. The capacity of the plant when completed will be 1,300 horsepower, consisting of two 650-horsepower units, operating under a head of 45 feet. The site is located on the South river about two miles from Powassan.

This power development entailed the construction of a concrete dam of five sluices with earth-fill dams on either end. A wood-stave pipe 8 feet in diameter and 370 feet long carries the water to the power house.

The construction work was carried out by staffs provided by the Commission and the hydraulic equipment is being supplied by The William Kennedy & Sons, Limited, of Owen Sound, Ontario.

### **South River**

A study of the South river from Bingham Chute to the village of South River is being made with a view to determining the best location for additional reservoirs, and the most economical sites for the further development of power for the Nipissing system. Studies are being made using the data already collected, and it is expected that the surveys will be completed early in 1924 and construction operations commenced during the summer.



## MISCELLANEOUS

### Bonnechere River

Besides the investigation of the storage of the several operating systems, the Commission has created storage facilities on the Bonnechere river at Round lake and Golden lake, providing regulation for the flow past the Renfrew municipal hydraulic plants, and for other plants between Renfrew and the storage dams. The immediate direction of the manipulation of this storage is done by the electrical superintendent for Renfrew. Arrangements for operating the logs and recording the lake elevations have been made with residents in the vicinity of the dams. The dams were inspected shortly before the end of the year and the maintenance work required on these dams has been completed.

### Storage at Cobden

The storage dams at Cobden constructed by the Commission for the municipality of Cobden were inspected during the year and found to be in good condition.

### Storage at Dog Lake

The storage dams constructed by the provincial Department of Public Works at the head of Dog river for the regulation of the flow of the Kaministiquia river were visited by an engineer, and conditions in regard to the dams favourably reported on, although the storage held for the regulation of the river had been very largely depleted.

### St. Mary River

A report was prepared for the municipality of Sault Sainte Marie in connection with the development of power from the St. Mary river. An engineer from the Hydraulic department made an examination of all the features in connection with the development of the residuary power for the municipality. In connection with this matter, records extending over sixty years were examined, and a report was furnished to the municipal authorities. The river is international; it has power developments on both sides as well as locks, and certain water for other purposes is required to be spilled and used. Fixed maximum and minimum elevations of lake Superior must be preserved in the interests of navigation which here is of supreme importance.

Besides the above, a summarized history was given of the orders and opinions of the International Joint Commission affecting the regimen of the St. Mary river.

The possible sites for further power development were found to be in the rapids, or by an extension at the site of the Great Lakes Power Company.

The report demonstrated it was reasonable to predict that, under ordinary load-factor conditions, a commercially saleable capacity of 16,000 horsepower could be obtained from the actually available supply of surplus primary and secondary discharge.

## GENERAL HYDRAULIC INVESTIGATIONS

Upon request of the Minister of Lands and Forests, the engineers of the Hydraulic department have reported on the plans of certain proposed hydro-electric and hydraulic plants.

Preliminary information has been prepared and forwarded in answer to many inquiries regarding possible developments throughout the Province. Often such service is supplied from the records of the Commission without the necessity of making special field investigations.



## SECTION V

### ELECTRICAL ENGINEERING AND CONSTRUCTION

#### (STATION SECTION)

#### NIAGARA SYSTEM

#### QUEENSTON GENERATING STATION

##### **Power House Superstructure**

The erection of the superstructure is complete for five units, and the interior walls and compartments necessary for the installation of the electrical apparatus for all units up to and including No. 5 are practically complete. Some interior finishing of floors and walls remains to be done.

##### **Generators**

No. 4 generator was turned over for the first time on November 21, and was placed in commercial service on November 30, 1922.

No. 5 generator was turned over on March 21, and placed on load on April 8, 1923. Complete electrical tests were conducted on this unit in July and August, but during the insulation test one coil failed. Due to load conditions, this coil was not replaced at the time, but a coil from each group of the winding was disconnected and the machine again placed in operation. It was agreed to delay the repairs until the spring of 1924, when load conditions will permit the machine being released from service.

##### **Transformers and Switching Equipment**

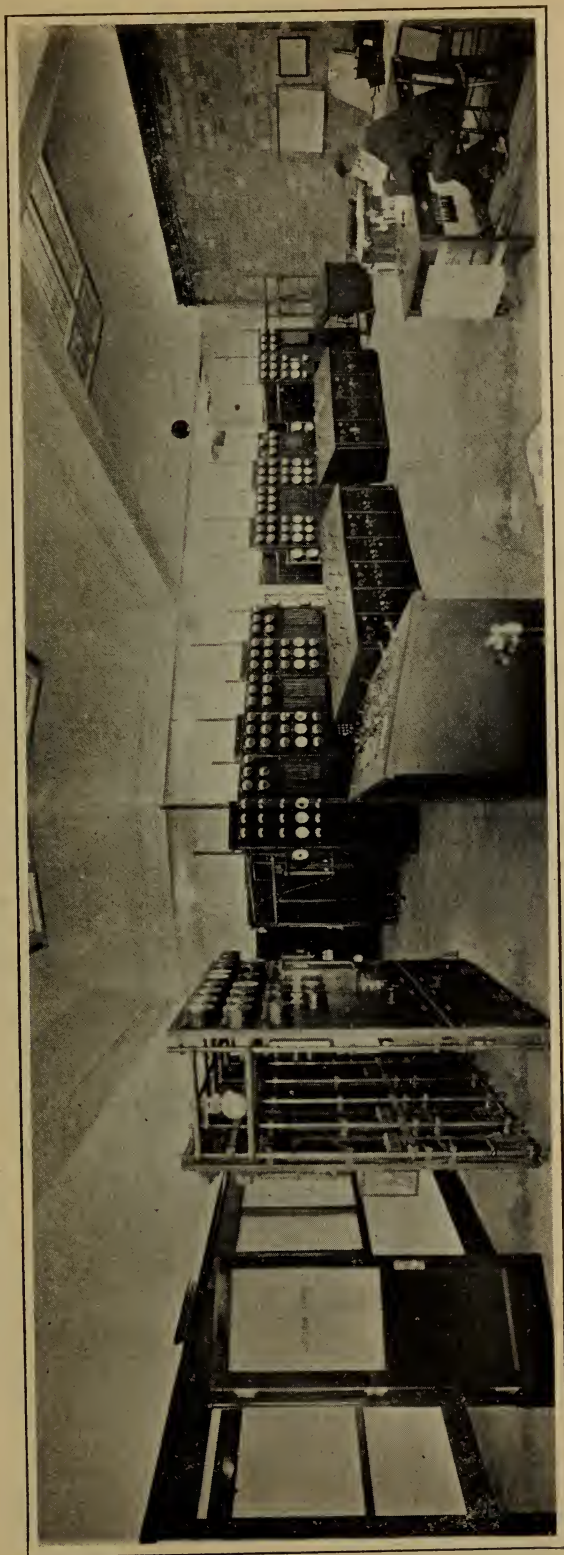
The transformers and switching equipment for Nos. 4 and 5 units were installed and placed in service at the same time as their respective generators. The transfer of switchboard equipment to the permanent control room has been successfully carried out.

##### **Screen House**

The superstructure of the screen house, to take care of six units, and the Administration building are complete with the exception of the interior treatment of the latter.

#### QUEENSTON EXTENSION

The steady increase in demand for power on the Niagara system made it imperative to increase the generating capacity of this station to take care of this load. After due survey of the power requirements, authorization was given on January 19, 1923, to proceed with the extension of the development for three additional units and to rush the work on the first or No. 6 unit, so as to have it available for service at the time of the peak load in December.



QUEENSTON-CHIPPAWA POWER DEVELOPMENT  
Power house: Control room for generating units Nos. 1 to 6

### Power House Superstructure

Plans and specifications have been prepared for the extension of the superstructure 126 feet to the north of the present building in order to accommodate the three additional units.

The framework of the extension will be of structural steel and the floors of reinforced concrete. The walls will be of concrete to the top of the parapet on the generator-room roof, and above this they will be of interlocking tile, surfaced with cement gunite. The interior partition walls, excepting those supporting electrical apparatus, will be built of hollow tile. A fireproof barrier wall will be constructed across the westerly portion next to the cliff, between the present building and the extension. This wall will have an opening through which to move the transformers. The opening will be equipped with a rolling steel door.

The structural steel, approximately 1,100 tons, was supplied by the Canadian Bridge Company, Limited, of Walkerville.

The windows, kalamein doors and trim, also all-louvres and dampers, have been ordered from the A. B. Ormsby Company, Limited, of Toronto. All the ornamental-iron hand-railings are being supplied by the Architectural Bronze and Iron Works of Toronto.

### Auxiliary Equipment

Three fans, each with a capacity of 120,000 cubic feet per minute, for conducting the warm air away from the generators, are on order from the Canadian Blower and Forge Company of Kitchener. The induction motors for driving these fans were purchased from the English Electric Company of St. Catharines.

### Generators

On January 18, 1923, an order was placed with the Canadian Westinghouse Company for an additional generator to be known as No. 6 unit. This generator will have a rating of 55,000 kv-a. 80 per cent power factor, 12,000-volt, 3-phase, 25-cycle, 187.5 r.p.m. and will be complete with a direct-connected exciter, voltage regulator and accessories. On January 29, an order was placed with the Canadian General Electric Company for two similar generators of 54,000-kv-a. capacity, to be known as No. 7 and No. 8 units. It was desirable to have machines of the same frame dimensions as those previously installed. From tests conducted on those machines, the two manufacturers determined that these capacities were the largest that could be obtained with their respective frames.

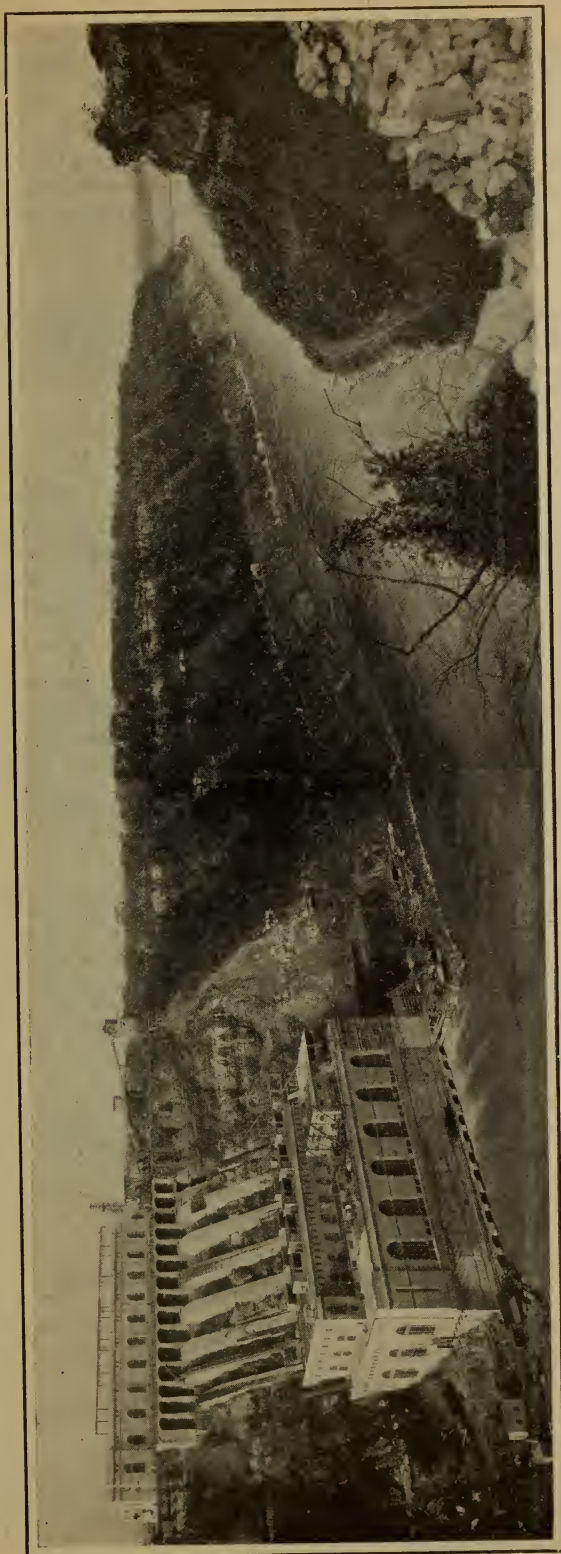
### Transformers

On February 19, 1923, an order was placed with the Canadian Westinghouse Company for nine single-phase transformers for Nos. 6, 7 and 8 banks. These transformers will each have a capacity of 18,330-kv-a. and will be similar in all other respects to the 15,000-kv-a. transformers now in operation, except that the tanks will be 10 inches higher and they will not be equipped with expansion tanks, the new "Inertiaire" scheme for conserving the oil being used. Provision will be made, however, for the installation of expansion tanks if considered advisable later.

### Switching Equipment

On March 27, 1923, an order was placed with the Canadian Westinghouse Company for fifteen type "C4", 15,000-volt, 3,500-ampere and four type "GA4" 135,000-volt, 600-ampere oil circuit-breakers.





QUEENSTON-CHIPPAWA POWER DEVELOPMENT

Power house and lower Niagara gorge looking north-west towards Queenston from the United States side of the Niagara river, October 27, 1923

On April 12, 1923, an order was placed with the Canadian General Electric Company for eight type "F.H.K.O.39", 132,000-volt, 600-ampere, oil circuit-breakers. Three sets of 12,000-volt, 3,000-ampere, current-limiting bus-reactors and three oxide-film arresters were also ordered from this Company.

The bus-supports, disconnecting-switches and line entrance bushings were all ordered from the Dominion Insulator and Manufacturing Company, Niagara Falls, Ontario. The necessary control switches, relays, meters, etc., will be duplications of those supplied for the other units.

#### **Progress**

Work on the extension is at present being confined to No. 6 unit. The structural steel is erected and approximately sixty per cent of the main floors and walls of the superstructure is now complete. A temporary end wall is being built immediately north of No. 6 section.

The assembly of No. 6 generator is nearing completion and the work of aligning the turbine and generator is under way. The windings are being dried out, using direct current from the auxiliary motor-generator set.

Two of the 18,330-kv-a. transformers have been received.

Approximately forty per cent of the high- and low-voltage switching equipment, including oil circuit-breakers, disconnecting-switches and busses, has been installed. The switchboards have all been erected.

#### **Screen House**

The plans and specifications have been prepared for the extension of the present screen house 100 feet to the north and the construction is under way.

The extension will be of similar construction to the present building. The structural steel, approximately 55 tons, is on order from the Canadian Bridge Company, Limited, of Walkerville and the steel sash and window frames from the A. B. Ormsby Company, Limited, Toronto.

### **ONTARIO POWER COMPANY GENERATING STATION**

In January, arrangements were made with the Canadian General Electric Company to rebuild and install No. 16 15,000-kv-a. generator, using undamaged parts from the original unit, excepting the rotor spider, and providing a pole-face winding to enable the generator to be used later as a synchronous condenser.

It was decided to install the rebuilt generator in No. 15 position. The original bed plate was therefore moved from No. 16 to No. 15 position by the Operating department, which also overhauled the 12,000-volt switching equipment and cables and the auxiliary equipment.

The installation of the rebuilt unit is under way and is scheduled to be completed in time for the peak load in December.

#### **Beamsville Distributing Station**

The pole-type station, mentioned in last year's Annual Report, was completed on November 29, 1922, but was not put in service until January 9, 1923.

#### **Beaver Wood Fibre Company Station**

In May, authorization was given for the purchase and installation of a Westinghouse recording reactive-volt-ampere meter and necessary equipment at the Beaver Wood Fibre Company, on the incoming 12,000-volt lines from the Ontario Power Company.

The meter was obtained from Ontario Power Company stores and installed by the Operating department and placed in service on October 12, 1923.

### **Chippawa Distributing Station**

The pole-type station, mentioned in last year's Annual Report, was completed and placed in service on March 28, 1923.

### **Grimsby Distributing Station**

The pole-type station, mentioned in last year's Annual Report, was placed in service December 4, 1922.

### **Lincoln Distributing Station**

To provide for the increasing rural load in the vicinity of St. Catharines and for changing the distribution voltage from 2,300 to 4,000, it was decided, in June, to build an outdoor 12,000/4,000-volt station at St. Catharines, incorporating it in the 12,000-volt outdoor extension to the St. Catharines Vine street station.

Provision has been made for the installation of one 12,000-volt incoming line, one 12,000-volt outgoing feeder, two 300-kv-a. three-phase transformers and three 4,000-volt outgoing feeders. The 12,000-volt switching-equipment and the 300-kv-a. transformers are to be of outdoor-type and the 4,000-volt feeder equipment of indoor-type.

In the initial installation, this station will be supplied from the middle of the St. Catharines municipal station 12,000-volt bus and one 12,000-volt breaker, only, will be installed. The line side of this breaker will be connected through disconnecting-switches to the Grimsby 12,000-volt line and also through disconnecting-switches and Schweitzer and Conrad fuses to one 300-kv-a., 12,000/4,000-volt, three-phase transformer. The 12,000-volt Grimsby line is equipped with choke-coils and lightning-arrester.

The 4,000-volt connections from the 300-kv-a. transformer to the 4,000-volt bus in the station will consist of three-conductor, lead-covered, armoured cable laid in the ground with disconnecting-switches to cut the transformer off the bus. Two 4,000-volt feeder-panels, complete with oil circuit-breakers, relays and graphic meters will be installed at present, one for the Port Dalhousie and the other for the Grantham township and Jordan feeders. These feeders will be taken underground, using armoured cable, to the 4,000-volt lines about 200 feet from the station.

The totalizing metering equipment, which is now installed at Merritton substation, to measure the total St. Catharines load, will be transferred to this station, and current-transformers will be installed in the 12,000-volt incoming lines and the Commission's 12,000-volt feeder, so that the Commission's load will be subtracted from the total, thus giving the correct St. Catharines load.

The 12,000-volt outdoor oil circuit-breaker was purchased from Ferguson, Pailin Limited; the 12,000-volt oxide-film lightning-arresters from the Canadian General Electric Company; the 300-kv-a. 12,000/4,000-volt, three-phase rural-type transformer from the English Electric Company of Canada, Limited; the three-conductor No. 1 lead-covered armoured cable and control cables from the Standard Underground Cable Company; the 12,000-volt current-transformer, the totalizing meter-panel, and the one 4,000-volt feeder-panel with oil circuit-breaker, relays, etc., from the Canadian Westinghouse Company.



The 12,000-volt disconnecting-switches, choke-coils and fuses have been ordered from the Commission's production and service department. The existing 2,300-volt feeder-panel will be used for the Grantham township feeder.

The layout drawings are being prepared by the Commission's engineering department and are practically completed. This equipment will be installed by the Public Utilities Commission of St. Catharines when they are building the extension to their own station, and should be completed early in 1924.

### **Merritton Municipal Station**

To take care of the increasing load on this station, the Commission on October 17, 1923, authorized the purchase and installation of a 300-kv-a., 3-phase, outdoor-type English Electric Company transformer to be installed outside the present station and connected in parallel with the existing bank of three 88.5-kv-a. single-phase transformers.

Drawings have been prepared and the work is being carried on by the Construction department. This should be completed in December, 1923.

### **Niagara Falls Municipal Station**

The installation of the equipment in the new substation, mentioned in last year's Annual Report, was completed on March 16, 1923. The first feeder from this station was placed in service on February 8, and the entire city load was carried on February 25, 1923.

Engineering assistance was given by the Commission in the purchase of equipment for an additional 3-phase lighting-feeder. This feeder was installed by the Construction department with temporary equipment and was ready for service on October 27, 1923. Permanent equipment has been ordered from the Canadian General Electric Company and is to be installed in January, 1924.

### **Ontario Power Company Distributing Station**

In December, a 2,300-volt feeder-equipment was installed in the Ontario Power Company distributing station, with one 3-conductor, No. 0 armoured, lead-covered cable up the hill to connect with the cable to the Niagara Falls waterworks. This feeder is equipped with an oil circuit-breaker, and connections from the station service-transformers are arranged to give three sources of supply.

Preliminary investigations have been made as to the possibility of installing differential relay protection on generators No. 1 to No. 14 inclusive.

In December, 1922, the Commission authorized the installation of the Northern Electric Company's type "P.A.X.", 100-line, automatic telephone equipment, in the Ontario Power Company's office building, with a 50-pair, lead-covered, armoured, underground cable to the Queenston generating station and a 15-pair similar cable to the Electrical Development Company's generating station and the Ontario Power Company's headworks. The cables were purchased from the Eugene F. Phillips Electrical Works and are being installed by the Transmission section of the Electrical Engineering department. The connections in the stations are being made by the Operating department. This equipment should be in service by January 1, 1924.

### **Peter Lyall and Sons Metering Station**

On May 9, 1923, authorization was given to purchase and install permanent metering equipment, consisting of two Lincoln graphic-recording wattmeters

with necessary potential and current-transformers to replace the temporary metering equipment.

The work was carried out by the Operating department and the equipment placed in service on September 11, 1923.

### **PORT COLBORNE TRANSFORMER STATION**

Estimates are being prepared on the construction, in 1924, of a substation at Port Colborne to replace the existing station, which will be dismantled, the site being required by the Department of Railways and Canals for the improvements to the Welland Canal.

### **Port Colborne Distributing Station**

As the present bank of transformers was not large enough to take care of the combined load of Port Colborne and Humberstone and as this station would shortly be dismantled to make way for the new Welland canal, temporary relief measures were necessary. The Commission on August 22, 1923, authorized the temporary installation of a bank of two 50-kv-a., Packard Electric Company and one 60-kv-a., Canadian Crocker Wheeler Company transformer (in reserve at the old Port Colborne distributing station) and one 2,300-volt feeder to take care of the load on the section of Port Colborne lying east of the Welland canal.

The work was carried on by the Operating department and the equipment placed in service on October 29, 1923.

### **St. Catharines Municipal Station**

In March, the Commission authorized engineering assistance to the Public Utilities Commission of St. Catharines in rearranging the 12,000-volt layout of their Vine street station. The 12,000-volt equipment and 12,000/2,300-volt power transformers will be located outdoors and one 12,000/550-volt power transformer and the 2,300-volt feeder-equipments will be located in the existing building. Incorporated in this station will be a 12,000-volt layout for the Commission's Lincoln distributing station as outlined elsewhere.

The 12,000-volt outdoor switch-structure will be built of two-inch iron pipe and provision will be made on this for two 12,000-volt incoming lines, three banks of 500-kv-a., 12,000/2,300-volt, single-phase transformers, two outgoing 12,000-volt power feeders for St. Catharines and one 12,000-volt incoming line, also the two 300-kv-a. 12,000/4,000-volt, three-phase transformers and one outgoing 12,000-volt feeder for the Commission.

The initial installation will include two 12,000-volt incoming line equipments, each consisting of an oil circuit-breaker, choke-coils, disconnecting switches and a lightning-arrester, and one 12,000-volt outgoing feeder with similar equipment, except that two sets of disconnecting-switches will be installed on the line side of the breaker for feeding two 12,000-volt lines. Two banks of 500-kv-a. single-phase transformers will be installed and connected to the main 12,000-volt bus through disconnecting-switches and to the 2,300-volt bus through three-conductor, armoured, lead-covered cable and 2,300-volt, indoor-type oil circuit-breakers.

The relay protection on the two incoming 12,000-volt lines will consist of both reverse-power and overload relays. Overload relays only will be installed on the 12,000-volt outgoing feeder. Control connections from the oil circuit-breakers and current-transformers to the switchboard will be of armoured lead-covered cable laid in the ground.



The 12,000-volt oil circuit-breakers were purchased from Ferguson, Pailin Limited, the 12,000-volt oxide film arresters and the 12,000/100-volt outdoor potential-transformers from the Canadian General Electric Company, and the switchboard-panel and relays from the Canadian Westinghouse Company. The 12,000-volt disconnecting-switches, fuses and choke-coils were ordered from the Commission's production and service department. The 500-kv-a. transformers were purchased from the Packard Electric Company.

The layout drawings have been prepared and all apparatus ordered by the Commission's Engineering department. The installation is being done by the Public Utilities Commission of St. Catharines and should be completed early in 1924.

The existing 2,300-volt layout in the station is being rearranged due to the removal of the 12,000-volt equipment. The work is being taken care of entirely by the local Commission.

### **St. Davids Distributing Station**

To take care of the increasing load in this district, the Commission, on August 22, 1923, authorized the purchase and installation of the equipment necessary for a pole-type station to be fed from the 12,000-volt line to Niagara-on-the-Lake. The station will consist of one 300-kv-a. three-phase, outdoor-type English Electric Company transformer, 13,200-volt choke-coils, disconnecting-switches and fuses and one 4,000-volt feeder with fuses and graphic-recording meter.

Plans have been prepared and the installation is now being carried out by the Construction department.

### **Whirlpool Distributing Station**

During the year, the 12,000-volt and most of the 4,000-volt switching equipment has been removed from this station. The air compressor section of this building is now the only section being used. This is being supplied with 4,000-volt power from Queenston generating station.

## **NIAGARA TRANSFORMER STATION**

As mentioned in last year's Annual Report the installation of the "C.R." reverse power and "C.O." ground relays on the incoming 12,000-volt feeders from the Canadian Niagara Power Company was completed in November, 1922.

The installation of the three Canadian General Electric Company's current-limiting reactors in set "C" location was also completed and the reactors placed in service in December, 1922. The extension of the air exhaust system for these reactors was completed in June, 1923.

The changes in the 110,000-volt, outdoor, resistance-type oil circuit-breakers were not made during the year as it was impossible to release these breakers from service. Due to changes in the 110,000-volt line connections it is expected to be able to finish this work before January 1, 1924.

During the year, galvanized wire fences were placed around the cooling ponds, the work being completed in August, 1923.

## **DUNDAS TRANSFORMER STATION**

On the morning of November 23, 1922, a serious fire occurred in Dundas transformer station, caused by a failure of a porcelain bushing in an oil circuit-



breaker on one of the 13,200-volt feeders. The building was slightly damaged, and all the 13,200-volt equipment was practically destroyed. The windings and bushings of the seven 2,500-kv-a. transformers were partially destroyed. The arc at the defective bushing communicated to the control circuits and rendered them inoperative, thus making it impossible for the relays or the operators to clear the circuits in trouble. By emergency connections, made by the Operating department, power service was restored the same morning.

It was decided to replace the transformers with one bank of three 5,000-kv-a. transformers and install more modern 13,200-volt switching equipment and larger capacity breakers. Authorization was given in January, 1923, for the repairing of the building and the installation of this new equipment. One transformer was obtained from Hamilton transformer station where it had been installed as a spare transformer, while the other two transformers were obtained from the Canadian Westinghouse Company's factory, Hamilton, where they had been completed on a reserve equipment order. The new 13,200-volt feeder-equipment is made up of Canadian Westinghouse Company type "GA-3" oil circuit-breakers, Ferguson, Pailin Limited disconnecting-switches and insulators, Canadian Westinghouse Company current-transformers and Canadian General Electric Company oxide-film lightning-arresters. The west wall of the control room and the north-west and south-west corners of the building were torn down and rebuilt. The partition-wall at the rear of the transformers was carried up to the roof and a partition-wall was constructed at the rear of the erection room. A section of the floor of the low-tension room was reconstructed and reinforced, with a repair-pit opening in the transfer runway. A new 50-ton transfer-truck was purchased from McGregor and McIntyre, Limited. Oil-barrier walls, with drains, were constructed around each of the 110,000-volt breakers. The large door was reconstructed with a transom. The work is being done by the Construction department, and the transformer bank with one 13,200-volt feeder to Hamilton was placed in service on September 23, 1923, while the other feeders, it is expected, will be placed in service in November, 1923.

In May, 1923, authorization was given to provide switching equipment for an additional 110,000-volt circuit to Toronto. It was decided to replace the present bus-tie breaker with a Canadian Westinghouse type "GA-4" breaker and connect it up to the two 110,000-volt busses for use as a line-breaker, and use former No. 2 transformer bank breaker as a bus-tie breaker. The removed bus-tie breaker will be stored at the station. This work is being done by the Construction department and it is expected will be completed in November, 1923.

In October, authorization was given for the construction of a new wash room and lavatory in the east basement to replace the one damaged by the fire, also for a septic-tank and disposal-bed. This work was partially completed on October 31, 1923.

The 45-foot extension to the east end of the station, mentioned in last year's Annual Report, was completed by the Construction department and the new equipment was placed in service on April 7, 1923.

### **Caledonia Distributing Station**

To take care of the increasing load at this station it was found necessary to increase the transformer capacity. Authorization was given by the Commission on April 18, 1923, to replace the three 150-kv-a., single-phase transformers with two 300-kv-a., 3-phase English Electric Company transformers. This work was carried out by the Construction department, and the new trans-

formers were placed in service September 2, 1923. The old 150-kv-a. transformers were shipped to Norwich distributing station.

### **Dundas Rural Distributing Station**

The pole-type station mentioned in last year's Annual Report was completed by the Construction department and placed in service May 2, 1923.

### **Hagersville Distributing Station**

As this station was considerably overloaded, it was decided to increase the transformer capacity. In April, 1923, authorization was given to purchase and install one 300-kv-a. 3-phase Packard Electric Company transformer outside the station to feed Hagersville at 2,300 volts. The existing bank of three 150-kv-a. transformers was reconnected for 4,000 volts to feed Hagersville Quarries, Limited. The above changes were completed and the transformers placed in service on June 20, 1923. It is proposed, in a short time, to connect the new 300-kv-a. transformer and the bank of three 150-kv-a. transformers in parallel for 4,000 volts for all the feeders.

Authorization was given in September, 1923, to purchase and install in Hagersville distributing station a feeder-panel to supply 4,000-volt power to the municipality of Jarvis.

This installation is being made by the Construction department and should be complete in November, 1923.

### **Waterdown Distributing Station**

To provide for the increasing load in this district, the Commission on July 31, 1923, authorized the purchase and installation of the equipment necessary for a pole-type station to be fed from the 13,200-volt line from Dundas transformer station. The station will consist of a 300-kv-a., 3-phase outdoor-type Packard Electric Company transformer with 13,200-volt choke-coils, disconnecting-switches and fuses and two 4,000-volt feeders with fuses. One feeder is for Waterdown village, the other is for a rural district. The load on the Waterdown feeder will be measured by graphic-recording wattmeters, while the rural feeder load will be measured by an indicating-demand meter, the metering equipment being housed in a small galvanized-iron building.

Plans have been prepared and the installation work which is being done by the Construction department should be completed early in 1924.

## **TORONTO—STRACHAN AVENUE TRANSFORMER STATION**

The installation of the first new oil circuit-breaker for the two 110,000-volt lines together with the new reverse-power (directional) relays referred to in last year's Annual Report was completed on June 20. The second breaker with the new relays for the second line was placed in service on September 8, and the new relays on the 110,000-volt line breaker at the south end of the station on September 27.

A fire-escape was provided for the control room. Brick barrier walls were constructed in front of the lightning-arresters and in the high-tension switch-room while brick curbs were constructed around the stair openings leading to the basement. A concrete curb with catch-basins, connected to sewers, was constructed along the east side of the original section of the station



to improve the drainage. A lavatory with shower-bath was provided on the gallery at the north-west corner of the building. This was completed in October.

The temporary installation of the sixth bank of 5,000-kv-a. transformers, to which reference was made in last year's Annual Report, was completed on August 17. The transformers and oil circuit-breakers were mounted on concrete foundations. The transformers were tested, operating in parallel with the transformers in the station, and are now being used to carry part of the station load. In September, it was decided to provide protection from freezing for the water piping, and the contract for this was awarded to Armstrong Cork and Insulation Company, Toronto. This work was practically completed during October.

All the work referred to except the lagging of the water piping was carried out by the Construction department.

### NEW TRANSFORMER STATIONS IN TORONTO

To provide for the increasing load in Toronto, it was decided in January to proceed with the erection of two new outdoor transformer stations with an initial capacity at each station of 30,000-kv-a. of two banks of three 5,000-kv-a., 110,000/13,200-volt transformers with necessary switching-equipment. These stations are to be known as Toronto Wiltshire avenue transformer station and Toronto Bridgman avenue transformer station. Plans were later changed to provide for three banks of transformers in the former station.

#### WILTSHIRE AVENUE TRANSFORMER STATION

##### Location

This station is located on the east side of Wiltshire avenue just south of Davenport road, adjoining the right-of-way of the Toronto Power Company's transmission lines.

##### General Description

An outdoor-type station is being built with electrical connections and disconnecting-switches supported on steel structures. The transformers will be located over concrete tunnels in which all oil and water piping and control cables will be located.

The Toronto Hydro-Electric System will connect its cables, which will be run underground, to the Commission's 13,200-volt disconnecting-switches, and will also mount fifteen disconnecting-switches for each bank of transformers on the steel structure.

##### Capacity

The first installation will be two banks of three 5,000-kv-a. transformers, but in the design of the station provision for the third bank is being made and also for further future extension.

##### Transformers

Six 5,000-kv-a. transformers are being supplied by the Canadian General Electric Company. The transformers for the third bank will be ordered later. Three transformers have now been delivered on the site.

##### Switching Equipment

One 110,000-volt, incoming circuit will terminate at the station and a tie circuit will connect with the Bridgman transformer station. Plans for the high- and low-voltage switching-towers were completed in June and the contract was let to the Canadian Bridge Company.



The outdoor-type 110,000-volt, oil circuit-breakers are being supplied by the Canadian Westinghouse Company from stock orders placed for the Niagara system. Some of these are type "GA-4" and have already been delivered, while the remainder will be type "G2-A" and will be shipped in March, 1924.

The 110,000-volt disconnecting-switches, which are of the "gang-operated" type, and also the 110,000-volt upright insulators, were ordered from the Dominion Insulator and Manufacturing Company of Niagara Falls, in July.

The necessary suspension-type insulators will be supplied by the Canadian Porcelain Company, Hamilton.

The necessary 110,000-volt, air-insulated current-transformers are being manufactured by the Commission's Production and Service department.

In July, orders were placed with the Canadian Westinghouse Company for ten 1,000-ampere, 13,200-volt type "GA-3", outdoor, oil circuit-breakers, four of which will be used at the Bridgman avenue transformer station. The first of these will be shipped in November.

Ten 13,200-volt, outdoor potential-transformers for this and the Bridgman transformer station were ordered from the Canadian General Electric Company in August, and in October an order for four additional potential-transformers was given to the Ferranti Meter and Transformer Manufacturing Company. This latter company is also supplying the fifteen 13,200-volt, 600-ampere, outdoor current-transformers which are required for the two stations.

Of the sixty 13,200-volt, 800-ampere, disconnecting-switches, copper parts for forty-eight were ordered in August from Ferguson, Pailin, Limited of Manchester, England, while twelve have been manufactured by the Commission's Production and Service department. All 13,200-volt insulators are being supplied by the Canadian Porcelain Company, Hamilton.

The control cable, which is rubber-insulated, lead-covered, is ordered from the Standard Underground Cable Company of Canada. The switchboard panels are being supplied by the Davis Slate and Manufacturing Company, Toronto. The drilling will be done by the Production and Service department, who will also supply the framework for mounting the panels. The amperes, volt-meters and indicating wattmeters will be of Weston type and are ordered from Powerlite Devices, Limited, Toronto.

The type "CR" directional relays for the 110,000-volt lines and the type "CO" overload relays for the transformer banks have been ordered from the Canadian Westinghouse Company.

The switchboard will be located in a small control building, which will also house the pumps for the water supply to the transformers, and the oil tanks and oil filter.

In September the Construction department started excavation for the footings and control building and has now completed forty per cent of this work and has also constructed the concrete footings for the piping tunnel.

#### Station Service

Power for station service will be supplied by the Toronto Hydro-Electric system, who will also provide the storage battery for operating the oil circuit-breakers.

Two 300-gallon centrifugal pumps have been ordered from the Northern Foundry and Machine Company, one thirty-gallon oil-filter from W. R. Perrin, Limited, and two oil storage-tanks from the Toronto Iron Works.

The erection of the station and the installation of all electrical equipment will be carried out by the Commission's construction department.

## BRIDGMAN AVENUE TRANSFORMER STATION

This station is located on Bridgman avenue on the site of the Toronto, Davenport road station, and to the south of the present building.

In June, it was decided to purchase two lots on the west side of Huron street, adjoining the Commission's property.

The first installation will be two banks each of three 5,000-kv-a. transformers similar to those being installed at Wiltshire transformer station. Provision is being made for a total of five banks.

The high-voltage equipment and lay-out will be similar to that at the Wiltshire transformer station. The station will be fed by one 110,000-volt circuit with the tie circuit to the latter station.

The first bank of three transformers has been delivered to the site while the second bank will be delivered in December. In August, the construction department started excavation work and has completed the concrete footings for one bank of transformers.

It is proposed to place the new switchboard in the control room of the Davenport road station, carrying the control cables in pans, through the tunnel and along the basement ceiling to a point near the south end of the station where the cables will rise up to the control-room. All the low-voltage equipment was ordered at the same time and from the same manufacturers as that for the Wiltshire transformer station.

A transformer oil filter was ordered from W. R. Perrin, Limited, and has been delivered. One 50-ton transfer-truck and two 400-gallon centrifugal pumps with motors were ordered from John T. Hepburn. An auxiliary water supply was obtained from the city mains through a six-inch pipe.

## LONDON TRANSFORMER STATION

The installation of the three 5,000-kv-a. transformers as No. 1 bank, which was referred to in the last Annual Report, was completed on February 24, and immediately afterwards the three 2,500-kv-a. transformers were shipped to Guelph transformer station.

The work of mounting a mechanical brake on the 10,000 kv-a. synchronous condenser, referred to in the last Annual Report, is practically complete. The brake will be tried out and placed in service in November.

As the storage batteries for operating the oil circuit-breakers had been in service since 1910, and were in bad condition, it was necessary to purchase a new battery. This was ordered from Exide Batteries of Canada, Limited, Toronto, in April. The capacity of the new battery is equal to the combined capacity of the two old batteries, one of which was originally installed in Toronto Strachan avenue transformer station. The new battery was placed in service on August 7.

To improve the relay system on the three 110,000-volt incoming lines, arrangements were made in April to install reverse power (directional) relays. These were ordered from the Canadian Westinghouse Company and will be connected up and placed in service about the end of December.

On account of the increased load on this and on the three 110,000-volt stations supplied by the lines through London station, it was found necessary in June to replace twelve of the original 110,000-volt disconnecting-switches. The new switch-blades and other copper parts were manufactured by the Production and Service department, while new insulators were purchased from



the Canadian Porcelain Company, Hamilton, on a stock order placed previously. The installation of the new switches will be completed during November.

All of the work is being done by the Construction department.

### **Delaware Distributing Station**

The change of the 4,000-volt, three-phase Delaware feeder to three single-phase feeders, as mentioned in last year's Annual Report, was completed and the equipment placed in service November 9, 1922.

To provide for the increasing load on this station, it was decided to increase the transformer capacity. Authorization was given on May 2, 1923, to remove the present bank of three 25-kv-a. transformers and install three 50-kv-a. transformers removed from Aylmer distributing station. This work is being done by the Construction department and it is expected will be completed in December, 1923.

### **Exeter Distributing Station**

The rural feeder out of this station, mentioned in last year's Annual Report, was completed by the Construction department and placed in service, January 21, 1923.

### **London (Rural Power District) Distributing Station**

In August, 1923, the building of a 13,200/4,000-volt, 150-kv-a. pole-type, station at Glendale, Westminster township, was authorized to supply power to this district.

The electrical equipment will include one 150-kv-a., 3-phase, 26,400-13,200/2,300-4,000-volt Moloney Electric Company transformer with suitable switching and metering equipment for one 4,000-volt feeder.

This installation will be done by the Construction department and should be completed and placed in service early in 1924.

## **GUELPH TRANSFORMER STATION**

In July, 1922, authorization was given to install one spare 2,500-kv-a. transformer in this station. The transformer was obtained from Kitchener transformer station after it had been rebuilt by the Canadian General Electric Company.

The two 1,250-kv-a. transformers, which were formerly installed as spare units, also the third 1,250-kv-a. transformer, were removed and stored at this station. This work was completed by the Construction department on October 31, 1923.

The installation of the new Ferguson, Pailin, Limited, 13,200-volt oil circuit-breakers, protective-screens in the gallery, shower-bath and improvements in the oil-piping systems, as mentioned in last year's Annual Report, was completed by the Construction department and all equipment placed in service March 9, 1923.

A new cooling pond 40 feet by 40 feet by 6 feet was constructed and placed in service in August.

### **Acton Distributing Station**

To take care of the growing load on this station, it was decided to increase the transformer capacity by installing a bank of three 75-kv-a. transformers in



parallel with the bank of three 75-kv-a. Canadian Westinghouse Company transformers already in the station. Authorization was given April 5, 1923, to proceed with this work.

Three 75-kv-a. Canadian Crocker-Wheeler Company outdoor-type transformers were shipped from Leamington distributing station and the installation work, which is being done by the Construction department, should be completed in November, 1923.

Authorization was given for the purchase and installation of a 2,300-volt feeder-panel and equipment for the municipality of Acton on June 6, 1923. The work is being done by the Construction department while installing the second bank of transformers.

### **Elora Distributing Station**

In order to give better protection to the electrical equipment in this station, the Commission on May 2, 1923, authorized the purchase and installation of Schweitzer and Conrad lightning-arresters on a pole adjacent to the station.

The work was done by the Operating department and the equipment placed in service on September 23, 1923.

### **Fergus Distributing Station**

In order to give better protection to the electrical equipment in this station, the Commission on May 2, 1923, authorized the purchase and installation of Schweitzer and Conrad lightning-arresters on a pole adjacent to the station.

The work was done by the Operating department and the equipment placed in service on September 23, 1923.

### **Georgetown Distributing Station**

To provide for the increasing load on Georgetown distributing station, it was decided to increase the capacity by installing two 300-kv-a. 3-phase transformers in place of the present three 150-kv-a. transformers. Authorization was given on February 15, 1923, to carry out this work, and during March and April, 1923, two 300-kv-a. Packard Electric Company transformers were installed by the Construction department and placed in service April 15, 1923.

The released transformers were shipped to Streetsville distributing station.

### **PRESTON TRANSFORMER STATION**

The replacing of No. 1 bank of 750-kv-a. transformers by a bank of 1,250-kv-a. transformers, as mentioned in last year's Annual Report, was completed and the new bank placed in service permanently on May 20, 1923. The alterations to piping to accommodate the larger capacity transformers were also completed.

In December, 1922, authorization was given to further increase the transformer capacity of this station by replacing No. 2 bank of 750-kv-a. transformers by a bank of 1,250-kv-a. transformers. The four 1,250-kv-a. transformers released from York transformer station were obtained and installed by the Construction department. The fourth transformer is to act as a spare unit for the two banks. This work was completed and the bank placed in service on March 11, 1923. Two of the 750-kv-a. transformers were shipped to St. Marys transformer station and four of them are now held at Preston transformer station as reserve equipment.

### **Preston Rural Power District**

In last year's Annual Report, it was stated that authorization was given for the installation of a 300-kv-a. 3-phase transformer at South Waterloo township distributing station to replace the three 20-kv-a., single-phase transformers. In view of the fact that three 75-kv-a., single-phase transformers were in reserve at High Falls generating station, it was deemed advisable to use these instead of the 300-kv-a., 3-phase transformer. These 75-kv-a. transformers were installed in Preston transformer station by the Construction department and placed in service on April 15, 1923. The 20-kv-a. transformers were placed in reserve equipment at Preston.

### **KITCHENER TRANSFORMER STATION**

In May, 1923, authorization was given to purchase and install the necessary outdoor switching-equipment, steel structures and wiring to connect the second 110,000-volt circuit from Preston transformer station to the 100,000-volt bus in Kitchener transformer station. The existing 110,000-volt bus is being extended out through the east end of the building far enough to connect to a future bank of three 5,000-kv-a., outdoor transformers, the 110,000-volt circuit being connected to the outer end of this extension. Provision is also made for future extension of this circuit past this station. This work is being done by the Construction department and will be completed early in 1924. The steel is on order and the concrete footings are complete.

The installation of the new Ferguson, Pailin, Limited 13,200-volt oil circuit-breakers, the 13,200-volt emergency-bus, the new relays and shower-bath, as mentioned in last year's Annual Report, was completed by the Construction department, but the concrete settling basin was not installed. The equipment was placed in service on August 1, 1923, the oil circuit-breakers being placed in temporary service in February, 1923.

Owing to the failure of the four Canadian General Electric 2,500-kv-a. transformers in this station, they were removed and replaced by the four Canadian Westinghouse 2,500-kv-a. transformers which had been released from Essex transformer station. The Canadian General Electric transformers were rebuilt by the manufacturer, after which three of them were shipped to Kent transformer station and one to Guelph transformer station.

### **Kitchener Municipal Station No. 1**

Engineering assistance was given to the Kitchener Light Commission covering a new 13,200-volt underground circuit to this station, the rearrangement of the present incoming lines and the installation of improved relay-protection, consisting of six reverse-power relays (three per line) and three inverse-definite-time overload relays (three point contact) for the two lines. Material is being ordered and installation, which will be completed early in 1924, is being done by the local Commission.

### **New Hamburg Distributing Station**

To take care of the increasing load on this station, it was decided to increase the transformer capacity by installing three 75-kv-a. Canadian General Electric Company transformers, from Streetsville, outside of the present station, in



parallel with the existing bank of three 75-kv-a. Packard transformers. Authorization was given February 13, 1923, to carry out this work.

It is expected that this installation, which is being done by the Construction department, will be completed early in December, 1923.

### **St. Jacobs Distributing Station**

The changes at this station, mentioned in last year's Annual Report, were completed on December 1, 1922.

## **STRATFORD TRANSFORMER STATION**

Authorization was given, in August, 1923, to purchase and install a 26,400-volt oil circuit-breaker and necessary equipment to control the Tavistock feeder. The authorization also covers the changing of the present service breaker into an emergency breaker, connecting the service transformers to the 26,400-volt busses through disconnecting-switches and Schweitzer and Conrad fuses, and the installation of walls 18 inches high around the four 110,000-volt oil circuit-breakers and oil drainage from these basins. This work will be completed by the Construction department early in 1924.

The installation of a second 1,250-kv-a. transformer bank with high- and low-voltage breakers as mentioned in last year's Annual Report, was completed and placed in service on December 16, 1922, the air and oil piping being also altered to accommodate the larger capacity transformers.

### **Stratford Municipal Station**

The local Commission was given engineering assistance in connection with the purchase and testing of a new 1,500-kv-a. 3-phase, 26,400-13,200/2,300-4,000-volt, oil-insulated, water-cooled, outdoor-type transformer. It was bought from the Canadian General Electric Company and delivered in April.

Further engineering assistance, covering the installation of this transformer and the purchase and installation of other necessary material to increase the capacity of the station and make changes in the switching equipment, was authorized by the Commission on November 22, 1922. These changes consist of replacing the existing 750-kv-a. transformer in No. 1 pocket with the new 1,500-kv-a. transformer and installing the removed transformer in the old station, to be used to supply 2,300-volt power; reconnecting the four power transformers on the low-tension side for 4,000-volts to supply the commercial and street lighting feeders; rearranging the low-tension bus for both 2,300 and 4,000 volts; installing two new lighting feeders and installing new 4,000-volt primary windings in the two regulators.

Drawings are being prepared and all necessary apparatus has been purchased for the above work, which will be carried on by the Construction department and should be completed in the early part of 1924.

### **Tavistock Distributing Station**

A new 575-volt feeder was installed in this station to supply the rural district in the vicinity. The voltage is stepped up to 4,000-volts by three 15-kv-a. power transformers on a pole immediately outside the station.

This was installed by the Construction department, placed in service April 11, 1922, and finally completed August 22, 1923.



### ST. MARYS TRANSFORMER STATION

The installation of transformers of greater capacity in this station, as mentioned in last year's Annual Report, has been deferred for the time being.

#### St. Marys Portland Cement Distributing Station

To take care of the increasing load, it was necessary to increase the transformer capacity at this station. Authorization was given in February, 1923, to replace the bank of three 150-kv-a. Packard Electric transformers with one 1,500-kv-a. 3-phase Packard Electric transformer. This installation was done by the Construction department and the transformer placed in service on June, 8, 1923. The transformer capacity at this station is now 3,000-kv-a. The 150-kv-a. transformers are stored at the station and are being placed on a reserve equipment work order.

The St. Marys Portland Cement Company requested that the Commission parallel the 1,500-kv-a. transformer and the bank of three single-phase, 500-kv-a. transformers on the low-tension bus. In order to operate these banks in parallel, with safety, the Cement Company's busses have to be rearranged and transformer oil circuit-breakers purchased and installed. The work is being done by the Commission for the Company and should be completed early in 1924.

### WOODSTOCK TRANSFORMER STATION

The work of replacing the bank of 1,250-kv-a. transformers with 2,500-kv-a. units, mentioned in last year's Annual Report, was carried out by the Construction department and the transformers were placed in service on June 3, 1923. The 2,500-kv-a. transformers with current-transformers for differential relay protection, together with much of the necessary connecting material, were obtained from the London transformer station.

The installation of larger current-transformers in the rural feeder, as mentioned in last year's Annual Report, was completed and the equipment was placed in service, November 2, 1922. An oil circuit-breaker was installed in this feeder by the Operating department and placed in service on March 17, 1923. The fuses on this feeder were replaced by fuses of larger capacity and later design, by the Operating department, and were in service on September 29, 1923.

Due to the increase in the possible short-circuit current on the 13,200-volt bus and feeders, authorization was given in June, 1923, to replace the present 13,200-volt oil circuit-breakers by more modern breakers of much higher rupturing capacity, also to install a 13,200-volt emergency-bus to facilitate maintenance work on the breakers. This work will be carried out in 1924.

#### Beachville Distributing Station

To take care of the increasing load in this district, authorization was given by the Commission on June 27, 1923, to install a bank of three 150-kv-a. single-phase transformers to replace the present bank of three 75-kv-a. transformers and to change the low-tension voltage from 2,300 to 4,000 volts.

The work was done by the Construction department and the new transformers were placed in service on July 22, 1923.

Owing to the fact that the distribution system could not be changed to 4,000-volts until the Spring of 1924, the low-tension voltage was left at 2,300 for the present.

### **Norwich Distributing Station**

To take care of the increasing load on this station, it was decided to increase the transformer capacity by removing the three 75-kv-a. transformers and installing three 150-kv-a. transformers obtained from Caledonia distributing station. Authorization was given April 18, 1923, to carry out this work and the installation was done by the Construction department, being completed and placed in service October 7, 1923. The three 75-kv-a. transformers which were released were shipped to Aylmer distributing station.

### **Woodstock Municipal Station**

Engineering assistance was given by the Commission in the purchase of three new 375-kv-a., 25-cycle, 26,400-13,200/2,300-575-volt, single-phase, oil-cooled transformers from the Canadian General Electric Company, together with paralleling reactors for three 375-kv-a. transformers at present supplying the pumping station, and also in inspecting the original transformers which failed in service in November, 1922, and which were rebuilt by the Canadian General Electric Company.

The new transformers were completed and delivered in February, 1923.

On the request of the Woodstock Public Utilities Commission, the current-transformers in the Woodstock transformer station, for totalizing the municipal load, were changed for larger capacity units by the Operating department and placed in service on October 2, 1923.

### **ST. THOMAS TRANSFORMER STATION**

The installation of a bank of 1,250-kv-a. transformers to replace a bank of 750-kv-a. transformers, as mentioned in last year's Annual Report, has been postponed.

### **Aylmer Distributing Station**

To take care of the increasing load on Aylmer distributing station, it was decided to increase the transformer capacity. Authorization to carry out this work was given on April 23, 1923, and during September and October the three 75-kv-a. transformers from Norwich distributing station were installed. The three 50-kv-a. transformers which were released were shipped to Delaware distributing station. The new transformers were placed in service October 14, 1923, the work being done by the Construction department.

### **St. Thomas Rural District Distributing Station**

In June, 1923, authorization was given to erect an outdoor-substation on St. Thomas transformer station site with a capacity of 150-kv-a. to step down from 13,200-volts to 4,000-volts to take care of a rural load.

A Ferranti 150-kv-a. 3-phase transformer, which was in reserve at St. Thomas transformer station, was installed and connected to the spare feeder. This work was done by the Construction department and the station placed in service on July 31, 1923.

### **St. Thomas Municipal Station**

In January, 1923, the St. Thomas Hydro-Electric Commission requested the installation of reverse-power relays, with additional current-transformers, on its two 13,200-volt incoming parallel lines. This work was done by the Construction department and the equipment was placed in service on September 20, 1923.



### BRANT TRANSFORMER STATION

On February 21, 1923, authorization was given to replace twelve 110,000-volt disconnecting-switches on the high-tension lines through Brant transformer station with switches of larger capacity and improved design made by the Commission. This work was completed and the equipment was placed in service on May 11, 1923.

On June 25, 1923, trouble developed in the 110,000-volt transformer breaker. Repairs were made, but the breaker again developed trouble and was replaced on October 11 by one which had been strengthened and improved by the Operating department, and held in storage at Dundas transformer station.

The 26,400-volt current-transformers on the two Brantford feeders were rewound for 200-100/5-5 amperes, and placed in service July 21, 1923. All the above work was done by the Operating department.

A wire fence was erected around the water-cooling pond in July, the work being done by A. R. Lundy, Toronto.

To take care of the increase in the load on this station, authorization was given on July 31, 1923, to add an outdoor transformer bank of three 5,000-kv-a. transformers and to replace the present spare 2,500-kv-a. transformer with a 5,000-kv-a. unit. The authorization also included the necessary switching equipment for two additional 26,400-volt feeders.

The 110,000-volt bus will be extended out through the west wall to serve the 5,000-kv-a. transformers through a new 110,000-volt oil circuit-breaker. Sectionalizing disconnecting-switches will be installed in the 110,000-volt bus between the line through the station and transformer bank No. 1 and also between bank No. 1 and bank No. 2. The tap from the through line past the station will be disconnected from the south end of the bus and carried over the building and connected to the new bus-extension. The tap pole-structure on this line will remain as at present.

The track-runway will be extended through a new large door in the west wall to serve transformer bank No. 2. The transfer-truck and the crane-beams will be strengthened to handle the 5,000-kv-a. transformers. A removable transom will be installed over the large door in the east wall to permit the entrance of the 5,000-kv-a. transformers into the erection room.

The oil and water-piping will be extended to take care of the outdoor transformers. A new water-pump of larger capacity will be installed and a water-cooling tower will be added to the cooling system.

The 26,400-volt bus will be sectionalized and extended through the west wall for two new outdoor feeders and also for connection from transformer bank No. 2. The potential-transformers will be arranged on the different sections of the bus. The switchboard will be extended to include the control of the outdoor breakers and the necessary metering equipment.

An emergency ladder will be installed from the second gallery to the main floor at the west end opposite to the present ladder.

■ A temporary railway siding was constructed near the station by the Canadian National Railways and the four 5,000-kv-a. transformers, which were purchased from the Canadian General Electric Company, have been received and unloaded.

A Canadian Westinghouse Company outdoor type "GA 4" 110,000-volt oil circuit-breaker and four Ferguson, Pailin, Limited outdoor 26,400-volt oil circuit-breakers have also been received and unloaded.

Work on the concrete foundations is proceeding, and the installation should be completed early in 1924.



### **Ayr Distributing Station**

A new 4,000-volt feeder was installed by the Construction department and placed in service August 3, 1923 to supply power to the H.O. Cereal Company.

### **Brantford Municipal Station**

The six Canadian General Electric "K9" current-transformers in the 26,400-volt lines were shipped to Toronto and rewound from 60-120/5 amperes to 100-200/5 amperes by the Operating department. They were returned to Brantford in the latter part of October.

### **Norfolk Distributing Station**

To take care of the increase in load, authorization was given in January, 1923, to erect an outdoor-type station adjacent to the Simcoe municipal station and install a 300-kv-a. 3-phase transformer to operate in parallel with the bank of three 100-kv-a. transformers in Simcoe municipal station, the two banks to serve the combined load of Simcoe and Port Dover at 4,000-volts.

A Packard Electric transformer was purchased and the station erected by the Construction department and placed in service January 26, 1923.

### **Paris Municipal Station**

Engineering assistance to the local Commission was authorized on May 2, 1923, to increase the transformer capacity on account of additional load.

Three 200-kv-a. single-phase transformers were removed and two 750-kv-a. three-phase, water-cooled transformers, purchased from Chatham, were installed, together with the necessary 2,300-volt oil circuit-breakers. The first 750-kv-a. transformer was placed in service on August 12, 1923, and the second went into service on October 14, 1923.

A water pump was purchased from J. T. Hepburn, Limited, for an emergency water supply and will be installed early next year. The normal water supply for the transformers is obtained from the city waterworks.

The station load will be totalized on the 2,300-volt side of the transformers and metered by a graphic-recording wattmeter and a graphic-recording reactive-volt-ampere meter, which with the necessary current-transformers will be the property of the Commission. This should be installed early next year.

### **St. George Distributing Station in Brant Transformer Station**

To take care of the increase of the Brantford Sand and Gravel Company's load and the necessity of supplying power to the Mohawk Sand and Gravel Company, it was necessary to increase the transformer capacity of this station. Authorization for this work was given in April, 1923. Three 50-kv-a. Canadian General Electric single-phase transformers were obtained from the Essex County system and installed outside the west end of Brant transformer station and connected in parallel with the existing bank of three 50-kv-a. transformers. This installation was done by the Construction department and the transformers placed in service May 11, 1923. Arresters will be installed in the 4,000-volt leads of each bank.

### **Waterford Distributing Station**

In order to supply power to the Waterford rural district, the Commission, on June 6, 1923, authorized the purchase and installation of the necessary equipment for a 4,000-volt rural feeder out of this station, with an indicating demand-meter to measure the load. The work was carried out by the Construction department and the feeder placed in service on October 10, 1923.

### **COOKSVILLE TRANSFORMER STATION**

During July, 1923, the frequency-changer set was dismantled and together with the three 350-kv-a., 25-cycle transformers was shipped to Mount Forest for operation in the Mount Forest frequency-changer station. The work was completed on July 29, 1923.

### **Port Credit Distributing Station**

The change in low-tension voltage from 2,300 to 4,000, mentioned in last year's Annual Report, was carried out by the Construction department, and completed May 6, 1923.

To take care of the increasing load, authorization was given on February 13, 1923, to increase the transformer capacity by installing one 300-kv-a., three-phase transformer outside of the station in parallel with the existing bank of three 75-kv-a. transformers. A new Ferguson, Pailin 13,200-volt oil circuit-breaker was installed controlling both the old and new transformers on the high-voltage side. This replaces the old and much lighter type of oil circuit-breaker. The installation was completed and the equipment placed in service September 20, 1923.

### **Streetsville Distributing Station**

To take care of the increasing load on this station, authorization was given February 13, 1923, to replace the bank of three 75-kv-a. transformers with three 150-kv-a. transformers from Georgetown distributing station. This work was completed by the Construction department and the transformers placed in service on April 15, 1923. The 75-kv-a. transformers, which were released, were sent to New Hamburg distributing station.

### **Toronto Township Distributing Station**

As the three 350-kv-a. transformers that supplied power to the Toronto township feeder were removed from Cooksville transformer station, the Commission on July 31, authorized the installation of three 50-kv-a. transformers to serve this load. Three Siemens' transformers, from the Toronto storehouse, were used. This work was done by the Construction department and the transformers placed in service on July 29, 1923.

### **KENT TRANSFORMER STATION**

The increase in the transformer capacity of this station, mentioned in last year's Annual Report, was deferred as the transformers intended for this station were shipped to Kitchener transformer station. This was necessary due to the failure of the 2,500-kv-a. transformer bank at Kitchener. The transformers from Kitchener have been rebuilt by the Canadian General Electric

Company and three of them have been shipped to Kent transformer station where they will be installed by the Construction department early in 1924, replacing the existing bank of 1,250-kv-a. transformers.

### **Fletcher Distributing Station**

The 150-kv-a. pole-type station, mentioned in last year's Annual Report, was completed and placed in service December 22, 1922.

### **Perch Distributing Station**

The pole-type station to supply power to the Petrolia waterworks at Perch, mentioned in last year's Annual Report, was completed and placed in service on December 1, 1922.

In order to supply power and light to the Petrolia rural district and a camping resort on lake Huron, authorization was given in June to purchase and install at Perch distributing station a 15-kv-a. single-phase transformer to be connected to the 550-volt circuit at the station to step up to 2,300 volts, the load to be measured by a Lincoln demand-meter. The work was done by the local superintendent of the Petrolia Public Utilities Commission and the transformers placed in service on August 10, 1923; the meter was placed in service on October 19, 1923.

### **Ridgetown Distributing Station**

To take care of the increasing load at this station, authorization was given February 13, 1923, to increase the transformer capacity by installing three new 150-kv-a. Packard Electric Company transformers outside the station, replacing the existing bank of three 75-kv-a. transformers. This work was completed by the Construction department and the transformers placed in service August 20, 1923. The three 75-kv-a. transformers were shipped to Tilbury distributing station.

At the request of the Ridgetown Public Utilities Commission in July, 1923, arrangements were made to install a separate 4,000-volt municipal feeder out of Ridgetown distributing station for the local waterworks station. This was completed and ready for service October 6, 1923.

### **Sarnia Municipal Station**

The installation of the 100-kv-a feeder voltage regulator, mentioned in last year's Annual Report, was completed and the regulator placed in service in January.

In May, engineering assistance was given to the Sarnia Hydro-Electric system covering the purchase and installation of one additional Canadian General Electric Company 30-kw. constant-current transformer with necessary switching equipment. This apparatus was installed by the Commission's Construction department, and placed in service October 6.

In June, on the recommendation of the Commission, the Sarnia Hydro-Electric system authorized the installation of improved relay-protection consisting of six reverse-power relays (three per line) six ammeters, and three inverse definite-time overload, three-point relays for the two incoming 26,400-volt lines; the reconnection of the existing current-transformers from a ratio of 40-80/5-5 to 80-160/5-5 amperes; the purchase and installation of one additional 160/5-ampere current-transformer in the middle phase of each line and the



installation of disconnecting-switches in the 26,400-volt arrester leads. Shipment of the new equipment is promised for November, 1923, and installation will be started as soon as it is received.

When this improved relay-protection is installed, the two incoming circuits will be operated in parallel, and will give better voltage regulation and improved service.

### **Tilbury Distributing Station**

To take care of the increasing load at this station, authorization was given February 13, 1923, to convert the three 75-kv-a. transformers, released from Ridgetown, to outdoor type and install them outside of the station in parallel with the existing bank of three 100 kv-a. transformers. The necessary covers and bushings for converting these transformers to outdoor-type were purchased from the Canadian Westinghouse Company. The work is being done by the Construction department and should be completed in November, 1923.

### **Wallaceburg Distributing Station**

In order to supply power to the rural district of Wallaceburg, the Commission on June 27, 1923, authorized the purchase and installation of the necessary material for a 4,000-volt rural feeder consisting of a 4,000-volt feeder-panel with oil circuit-breaker and an indicating-demand meter. The work is being done by the Construction department and the equipment should be placed in service in November, 1923.

## **ESSEX TRANSFORMER STATION**

The deferred work outlined in the 1921 Annual Report and mentioned in the 1922 Annual Report was proceeded with in November, 1922.

The installation of the 26,400-volt switching equipment, excepting, however, one new outgoing feeder; the improved overload relay-protection on the existing 26,400-volt feeders; the differential relay-protection on the two banks of transformers and the larger capacity water pumps was completed in October, 1923. The different pieces of apparatus were placed in service as their installation was completed.

The installation of No. 1 bank of 5,000-kv-a. transformers, mentioned in last year's Annual Report, was not completed until August, as changes were being made in the water piping. Temporary water connections were, however, made so that No. 1 bank of transformers could be used in case of emergency.

The septic tank for sewage disposal was completed in August, 1923.

Original plans called for a second cooling pond, but on further investigation it was decided to install a cooling tower in the existing pond. This tower will be completed early in 1924.

Oil-barriers, with drain-pipes to the outside of the station, are being installed around the 110,000-volt oil breakers and will be completed in December, 1923. Fences were placed around the cooling-pond and the 26,400-volt lightning-arresters.

### **Amherstburg Distributing Station**

To take care of the increasing load on this station, authorization was given on December 20, 1922, to purchase and install a 300-kv-a., three-phase, outdoor-type transformer in parallel with the present bank of three 100-kv-a. transformers, also to purchase and install a graphic-recording wattmeter and a

recording reactive-volt-ampere meter replacing the type R.A. indicating-demand meter for measuring the station load. This installation was done by the Construction department and the transformer placed in service on May 13, 1923.

In order to have better line protection, the Commission on May 16, 1923, authorized the purchase and installation of equipment necessary to make the 26,400-volt, outgoing-line, oil circuit-breaker automatic; also the removal of the non-automatic breaker on the incoming line and its shipment to Kingsville. This work is being done by the Construction department, but due to delay in obtaining the automatic mechanism, it will not be completed before the early part of 1924.

### **Belle River Distributing Station**

The pole-type station, mentioned in last year's Annual Report, was completed and placed in service December 5, 1922.

### **Canard River Distributing Station**

The installation of disconnecting-switches and fuses on the pole structure at this station, mentioned in last year's Annual Report, is still deferred owing to the possibility of dismantling the station and serving this load from the Sandwich rural power district.

### **Essex Distributing Station**

In December, 1922, authorization was given to purchase and install Schweitzer and Conrad lightning-arresters on the pole structure on the 26,400-volt side of the station. The installation was done by the Construction department and the arresters placed in service April 15, 1923.

### **Kingsville Distributing Station**

In order to have better line protection at this station, the Commission on May 16, 1923, authorized removing the 26,400-volt, incoming-line, oil circuit-breaker at Amherstburg distributing station, equipping it with automatic control and installing it on the outgoing line at Kingsville.

The work is being done by the Construction department, but due to delay in obtaining the automatic mechanism, it will not be completed until the early part of 1924.

### **Leamington Distributing Station**

To take care of the increasing load on this station, authorization was given in December, 1922, to increase the transformer capacity and to install Schweitzer and Conrad lightning-arresters on the 26,400-volt side of the transformer bank. Three 150-kv-a. single-phase Packard Electric Company transformers were purchased to replace the bank of three 75-kv-a. transformers. This work was done by the Construction department and the equipment placed in service on March 15, 1923.

The released 75-kv-a. transformers were shipped to Acton distributing station.

### **Walkerville Municipal Station**

In October, 1922, authorization was given to install metering-equipment in this station on the Ford City and Riverside feeders. This equipment includes a Westinghouse graphic-recording wattmeter and reactive volt-ampere meter to measure total load on the two Ford City feeders and Riverside feeder and a



Lincoln graphic-recording wattmeter and reactive volt-ampere meter to measure the load on the two Ford City feeders only. The installation of these meters, which were purchased by the Commission, was done by the Walkerville Hydro-Electric system and completed February 11, 1923. The panels on which the meters are mounted, as well as the current and potential-transformers, are the property of the Walkerville Hydro-Electric system.

Following the recommendation of the Commission, the Walkerville Hydro-Electric system in June, 1923, authorized improving the relay protection on the two 26,400-volt, incoming lines, changing the totalizing metering-equipment from 4,000 to 26,400-volts and reinforcing the Westinghouse "E2" line breakers to increase the rupturing capacity.

The improved relay protection and the changes in the metering equipment will include the installation of six reverse power relays, three per line, three inverse definite time, three point, overload relays, six ammeters, current and potential-transformers. To reinforce the breakers, stronger covers and tanks will be required.

The 26,400/100-volt potential-transformers were purchased from the Canadian General Electric Company, while the fuses, resistors and current-transformers were purchased from the Canadian Westinghouse Company. Drawings covering the changes were prepared by the Engineering department and the installation is being carried out by the Construction department. The work should be completed during November, 1923.



WINDSOR MUNICIPAL STATION





**WINDSOR MUNICIPAL STATION**  
The 4,000-volt oil circuit-breakers

### **Windsor Municipal Station**

The installation of the equipment in the extension to this station, outlined in last year's Annual Report, was completed and the station placed in service in February, using the two 1,500-kv-a. Crocker-Wheeler transformers which were rented from the Commission.

The new contract for the two 3,000-kv-a. transformers was placed with the Canadian General Electric Company in November, and delivery of the first unit was made in March and the second unit in April. They were immediately installed and placed in service.

In May, the Windsor Hydro-Electric system ordered a third 3,000-kv-a. transformer from the Canadian General Electric Company. Engineering assistance was given to them in purchasing the necessary 26,400-volt and 4,000-volt switching equipment for this transformer and the necessary equipment for two additional 4,000-volt lighting-feeders, including two 3-phase, 100-kv-a. regulators. The contract for the supply and installation of this apparatus was let to the Canadian Westinghouse Company in July.

The third 3,000-kv-a. transformer was delivered in September, and, as the switching equipment was not promised until December, sketches were prepared by the Commission for temporary connections. However, the Canadian Westinghouse Company gave a promise of an earlier delivery and installation of the transformer switching equipment and temporary plans were therefore discarded and the transformer will probably be placed in service early in December. The installation of the equipments for the two feeders will not be completed until early in January, 1924, as the two regulators will not be ready earlier.

The storehouse, as outlined in last year's Annual Report, was completed in the spring of 1923.

### YORK TRANSFORMER STATION

The new 5,000-kv-a. transformers referred to in last year's Annual Report were placed in service on November 26, and the four 1,250-kv-a. transformers were removed for shipment to Preston transformer station. The work of installing the switching equipment was started, but only one new 13,200-volt breaker was installed when the building and all equipment in it were destroyed by the fire on December 4. The material destroyed included all the 110,000-volt switching equipment, the 13,200-volt equipment to control the lines to Etobicoke distributing station, the station service breaker, three 50-kv-a. station service transformers and the three 150-kv-a. transformers which had been moved from Mimico distributing station in November.

Plans were made at once to rebuild the station, using outdoor equipment with steel structures for the disconnecting-switches and connections, and with concrete foundations for the breakers.

The 110,000-volt outdoor-type breaker and disconnecting-switches were obtained from the Canadian Westinghouse Company on stock orders previously placed, and the steel for 110,000-volt structure was ordered from The Ontario Wind Engine and Pump Company on February 15.

Six 13,200-volt, outdoor-type, oil circuit-breakers were ordered from the Canadian Westinghouse Company on January 23.

One 13,200-volt type "OF", outdoor arrester was ordered from the Canadian General Electric Company on April 2, and will be connected to the 13,200-volt bus.

The necessary 13,200-volt disconnecting-switches were manufactured by the Production and Service department, being mounted on insulators supplied by the Canadian Porcelain Company, Hamilton. The steel for the 13,200-volt structure was ordered from the Canadian Bridge Company.

A 300-kv-a., 3-phase, 13,200/4,000-volt transformer purchased from the Packard Electric Company was shipped to replace the 150-kv-a. transformers destroyed by fire. This transformer was placed in temporary service on February 24, to feed the northern section of Etobicoke township.

The station service will be supplied by three 25-kv-a., 2,300/575-volt transformers and one 7½-kv-a., 2,300/110-220-volt transformer.



For the switchboard, five new panels were ordered from Powerlite Devices Limited, Toronto, and two panels will be obtained from Mimico distributing station.

The contract for the erection of the control building was awarded to A. B. Ormsby Company, Limited, on May 15. This building will be sheeted:

The erection of the 110,000-volt steel structure and the installation of the new breaker were finished and placed in service on September 2.

The erection of the 13,200-volt structure is finished and the new 13,200-volt equipment should be in service early in December. At the same time the new switchboard will be ready to control the station.

Plans are now being made to erect a wire fence on angle-iron posts set in concrete to enclose the station equipment. This will be erected in December.

All the work at this station, except the erection of the control building and of the fence is being done by the Construction department.

### **Etobicoke Distributing Station**

In December, 1922, authorization was given to install a 1,500-kv-a., 3-phase transformer to serve the 4,000-volt customers fed from this station. It was decided to use the Canadian Crocker Wheeler water-cooled transformer which was stored here. The low-tension switching equipment and connecting material was purchased from the Canadian General Electric Company and was installed by our Construction department. The transformer was placed in service on December 27, 1922, but the permanent switching equipment will not be completed until November, 1923.

### **Etobicoke Township Distributing Station**

As the 300-kv-a. transformer feeding the northern part of Etobicoke township was loaded to capacity, it was decided in May to install a second transformer of similar capacity. This second transformer was obtained from the English Electric Company on a stock order previously placed, and was shipped in August. At this time, it was decided that the section of York transformer station feeding 4,000-volt power to Etobicoke township should be known as Etobicoke township distributing station. The 300-kv-a. Packard Electric Company's transformer referred to in the section of this Annual Report covering York transformer station, the new 300-kv-a. transformer and all the 4,000-volt switching equipment and connections will comprise the equipment of this station, while all 13,200-volt equipment will remain in York transformer station.

The 300-kv-a. transformer purchased from the English Electric Company has been connected up permanently, and will be used to supply Etobicoke township load when the new 13,200-volt structure is placed in service, in December, 1923. The 300-kv-a. transformer purchased from the Packard Electric Company will then be released from its temporary service and will be permanently connected up.

### **Lakeview Distributing Station**

In September, the Commission authorized the purchase and installation of 440-volt metering equipment for measuring the railway load in Lakeview substation near Port Credit. This equipment consists of a Lincoln graphic wattmeter and Westinghouse watthour meter with necessary current and



potential-transformers. The installation is being done by the Railway department and will be completed in November, 1923.

### **Mimico Distributing Station**

In the last Annual Report it was stated that the three 150-kv-a., 13,200/2,300-volt, single-phase transformers would be moved to York transformer station together with switching and metering equipment for two 4,000-volt feeders to supply Etobicoke township. The transformers were moved in November and were destroyed in the fire at York station on December 4. The switching equipment was not removed until some time later, and it was therefore available for use in the rebuilt York transformer station. The switching equipment, not used, was transferred to stores in January.

### **Mimico Municipal Station**

At the request of the Public Utilities Commission of Mimico authorization was given on September 8, 1923, for the erection of a semi-outdoor station and the purchase and installation of the necessary equipment.

Two 750-kv-a. outdoor transformers will be installed and the high-tension switching equipment will be mounted on a pole structure, while a small brick building will house the equipment for the 4,000-volt feeders. This station is to be placed on a site on Mimico avenue, and is to be fed from the two 13,200-volt circuits from York transformer station to Etobicoke distributing station.

Drawings are being prepared and the installation will be made by the Construction department. The station should be in service early in 1924.

The load will be measured on the 13,200-volt side by totalizing meters owned by the Hydro-Electric Power Commission

## **HAMILTON TRANSFORMER STATION**

The installation of No. 2 bank of 5,000-kv-a. transformers was completed and the transformers placed in service in December, 1922.

The control and switching building was completed in May and a cooling pond 75 feet square with a frame pump-house was constructed on the creek near the station. The drainage from the station and the transformers is led back to the pond by vitrified drain-pipes.

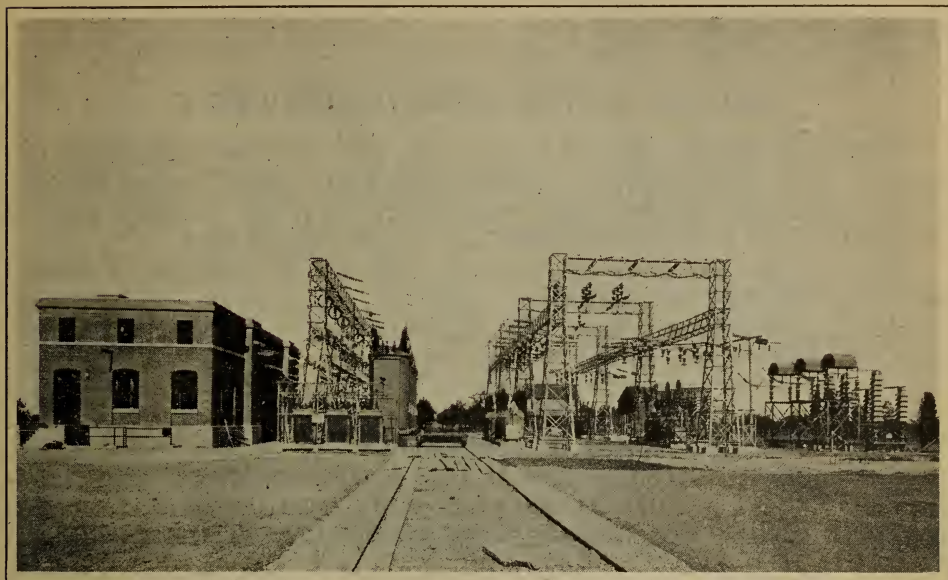
All the mechanical equipment, mentioned in last year's Annual Report, has been placed in service.

The grounds immediately surrounding the station have been graded ready for seeding, crushed stone walks have been made where necessary and the whole station site has been fenced.

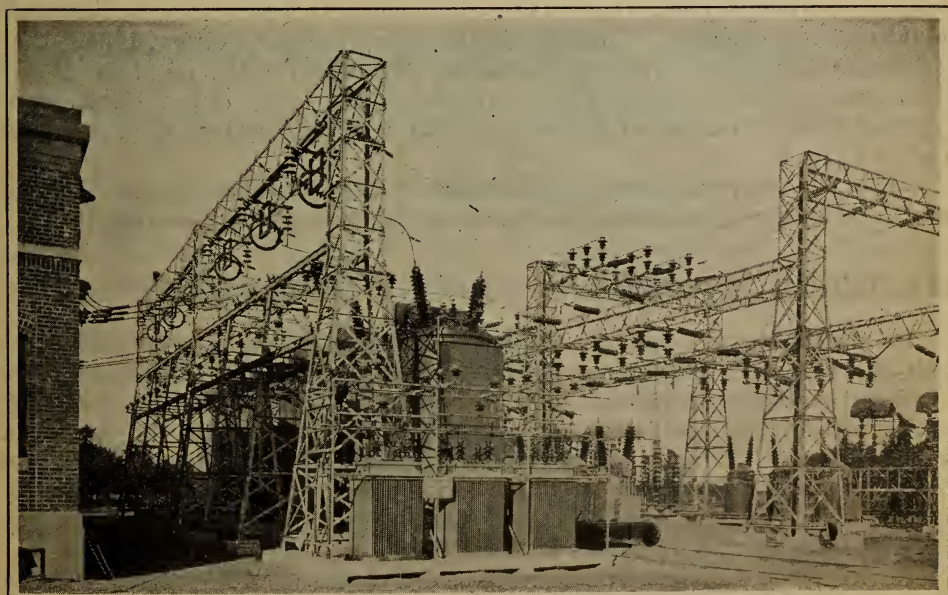
A brick house on the grounds has been repaired and water connection made. A sewage system consisting of septic tank with disposal bed was constructed. The house will be occupied by one of the station operators.

The complete 13,200-volt equipment and control-room was installed in one large building with the auxiliary-equipment (except the water pumps) in the basement, instead of in separate small buildings as outlined in the 1921 Annual Report. The spare 5,000-kv-a. transformer was transferred to Dundas transformer station in August to form a bank with two similar transformers.

The first 110,000-volt line oil circuit-breaker and the 75-kv-a. service transformers, moved from Hagersville and converted into outdoor-type by the Canadian Westinghouse Company, were installed and placed in service in March.



HAMILTON MUNICIPAL STATION  
General view of station from south



HAMILTON MUNICIPAL STATION  
Service transformers and high-tension current-transformers



The second 110,000-volt line breaker and the 13,200-volt equipment together with the electrical service equipment were installed and placed in service in June. All installation of equipment was done by the Construction department and completed on September 1, 1923.

### NIAGARA SYSTEM RESERVE EQUIPMENT

Authorization was given on October 17, 1923 for the purchase of two 150-kv-a., and two 300-kv-a., 26,400-13,200/4,000-2,300-575-volt, 25-cycle, 3-phase, self-cooled, outdoor-type transformers from the Moloney Electric Company. These transformers should be available early in 1924.

Authorization was given in February, 1923, for the purchase of twenty 5,000-kv-a., 63,500/26,400-13,200-volt, 25-cycle, single-phase, water-cooled, outdoor-type transformers from the Canadian General Electric Company. These transformers are similar to the twenty-one 5,000-kv-a. transformers purchased from the same manufacturer in December, 1920. The order was placed in February, 1923, and ten of the transformers have been delivered and the balance should be completed by January, 1924.

Authorization was given on June 27, 1923, for the rebuilding of seven 2,500-kv-a., 63,500/13,200-volt transformers which were damaged in the fire at Dundas transformer station. The order was placed with the Canadian General Electric Company on June 28, 1923. The new rating will be 2,850-kv-a., 63,500/26,400-13,200-volts, 25-cycle, single-phase, water-cooled, outdoor-type transformers. They should be ready for delivery early in 1924.

Authorization was given on July 31, 1923, for the purchase of seven outdoor and one indoor type 110,000-volt, 600-ampere, electrically-operated, oil circuit-breakers with bushing type current-transformers and two extra bushings. An order was placed on August 24, 1923, with the Canadian Westinghouse Company for seven outdoor-type, "G2A", oil circuit-breakers, two spare bushings and current-transformers. These should be completed in February, 1924.

Authorization was given on December 20, 1922, for the purchase of six 800-ampere, 26,400-volt, oil circuit-breakers. The order was placed with Ferguson, Pailin, Limited on January 3, 1923, and the breakers were received October 8, 1923.

All of the above equipment is intended for use in stations on the Niagara system and most of it has already been allotted to stations being built or extended.

### ELECTRICAL DEVELOPMENT COMPANY GENERATING STATION

In March, the Commission authorized the installation of six 12,000-volt, single-phase, current-limiting reactors in the leads of No. 1 and No. 2 generators, to replace reactors which had failed in operation. The new reactors had been ordered by the Toronto Power Company in July, 1922, from the Canadian General Electric Company. They have a rating of three and one-half per cent reactive voltage drop based on 10,000-kv-a. and a current carrying capacity of 600-amperes continuously. They were installed by the Operating department and placed in service in April, 1923.

In July, the Commission authorized the changing of the existing Otis-Fensom pit elevator from manual to automatic control. The contract for the supply and installation of the necessary material for making this change was placed with the Otis-Fensom Elevator Company in July. It is expected that the change will be completed in December.



In September, the Commission authorized the installation of differential relay protection on all the generators in this station, and the grounding of the generator neutrals through disconnecting-switches and water-barrel resistances.

The relay protection on each generator will consist of three ring-type current-transformers, three single-pole differential relays and one special master relay to open the generator 12,000-volt oil circuit-breaker and the field circuit of the direct-connected exciter.

As the generators are operated in four groups, four sets of water-barrel resistances, each consisting of two barrels in parallel and four neutral busses, will be installed. Disconnecting-switches will also be installed between these busses and the water-barrels, which will be connected to the existing station ground bus and to the penstocks.

The current-transformers and differential relays are being made up by the Operating department and most of the balance of the apparatus required is being obtained from the Toronto Power Company stores. The installation of this relay-protection and the ground-connections is being done by the Operating department and will be completed early in 1924.

In May, 1923, the Commission authorized the installation of a 2,300-volt feeder equipment in the Electrical Development Company generating station, and the installation of a three-conductor, lead-covered, armoured cable from there to the Ontario Power Company headworks, to replace the temporary wood-pole line. The cable was purchased from the Eugene Phillips Electric Works and installed by the Transmission section while the Westinghouse "B-2" oil circuit-breaker and additional equipment were installed by the Operating department. The work was completed and the equipment placed in service on July 30, 1923, and the part of the 2,300-volt temporary pole line running through Queen Victoria park was removed.

### **Beaver Board Fibre Company Station**

Authorization was given in June for the installation of a Westinghouse recording reactive-volt-ampere meter and necessary equipment on the incoming 12,000-volt lines from the Toronto Power Company. This meter was obtained from the Ontario Power Company stores and installed by the Operating department, being placed in service on September 7, 1923.

### **Mount Joy Distributing Station**

In July, 1923, the building of a 13,200/4,000-volt, 150-kv-a., pole-type station at Mount Joy was authorized, in order to supply power to Markham and Stouffville, the station to be fed from a tap off the 12,000-volt line on Yonge street.

The electrical equipment consisting of one 150-kv-a., 3-phase, 26,400-13,200/2,300-4,000-volt, rural-class, Canadian General Electric Company transformer and two 4,000-volt feeders with necessary switching equipment and indicating-demand meters, was installed by the Construction department and placed in service September 24, 1923.

### **Toronto Power Company Distributing Station**

In September, the installation of an emergency service water-pipe connection between the Toronto Power Company distributing station and that of the Canadian Niagara Falls Power Company was authorized. The Commission's part of this connection, being from the Toronto Power Company station to the centre line of the M.C.R. tracks, was installed by the Operating department and completed on October 3, 1923.

## **SEVERN SYSTEM**

### **Coldwater Distributing Station**

As the load at this station exceeded the capacity of the three 25-kv-a. transformers, it was decided to replace them with three 40-kv-a. transformers which were held in reserve at Toronto, for use on the Severn system. The 25-kv-a. transformers were crated and stored on the site as Severn system reserve equipment and the three 40-kv-a. transformers, with larger current-transformers, were installed July 18, 1923.

### **Collingwood Electric Castings Distributing Station**

The three 300-kv-a. transformers were removed to Penetang distributing station on March 5, 1923. All other equipment in this station is the property of the Collingwood Commission.

### **Penetang Distributing Station**

To take care of the increased demand for power at this station, it was necessary to increase the transformer capacity. Authorization was given December 11, 1922, to replace the three 200-kv-a. transformers with the three 300-kv-a. transformers obtained from the Collingwood Electric Castings distributing station. The 200-kv-a. transformers were removed and stored on the Penetang station site as Severn system reserve equipment and the 300-kv-a. transformers were installed on a concrete pad outside the station. This work was carried out by the Construction department and completed March 4, 1923.

### **Phelpston Distributing Station**

Authorization was given in October, 1923, to construct a 10-kv-a., 22,000-volt, rural-class, pole-type station to serve the hamlet of Phelpston with 110/220-volt power.

One 10-kv-a., single-phase, 60-cycle, 22,000/220-110-volt Moloney Electric Company transformer and the Commission's standard choke-coil, disconnecting-switch and fuse units will be mounted on a pole and arranged to tap either of the 22,000-volt lines by means of flexible leads and spring clamps. The station load will be measured by means of an indicating demand meter mounted in a box on the pole.

Drawings are being prepared and this station should be in service early in 1924.

## **PORT SEVERN DEVELOPMENT**

The development, mentioned in last year's Annual Report, has been deferred.

### **Waubauskene**

In April, 1923, a frame house in Waubauskene was purchased, painted and decorated for the use of the superintendent of the Severn and Wasdell systems.

## **EUGENIA SYSTEM**

### **EUGENIA FALLS GENERATING STATION**

It was decided to install hot air furnaces in the five operators' cottages at this station. The furnaces are being installed by the Howard Furnace Company, Toronto, and should be complete in November, 1923.

#### **Chesley Distributing Station**

Authorization was given in March, 1923, for the installation of one 4,000-volt feeder in this station to serve the municipality of Paisley. The work was completed by the Construction department on August 13, 1923.

#### **Grand Valley Distributing Station**

The graphic-recording demand-meter in the Grand Valley feeder is being replaced by a more suitable instrument.

#### **Holyrood Distributing Station**

The graphic wattmeter, measuring the station load and the indicating demand-meters on the Ripley and Lucknow feeders, were replaced by more suitable graphic-recording wattmeters, by the Operating department, October 16, 1923.

#### **Kincardine Distributing Station**

The installation of larger capacity fuses in the 22,000-volt incoming line and smaller-ratio current-transformers on the Kincardine feeder, as mentioned in last year's Annual Report, was completed by the Operating department and the equipment placed in service in December, 1922.

#### **Meaford Distributing Station**

Authorization was given in August, 1923, to proceed with the construction of a 300-kv-a., 22,000-volt, pole-type station on a site owned by the municipality of Meaford, adjacent to the Meaford waterworks buildings.

The municipality is adding an extension to these buildings and a section will be utilized for housing the Commission's metering equipment and the municipality's feeder-equipment.

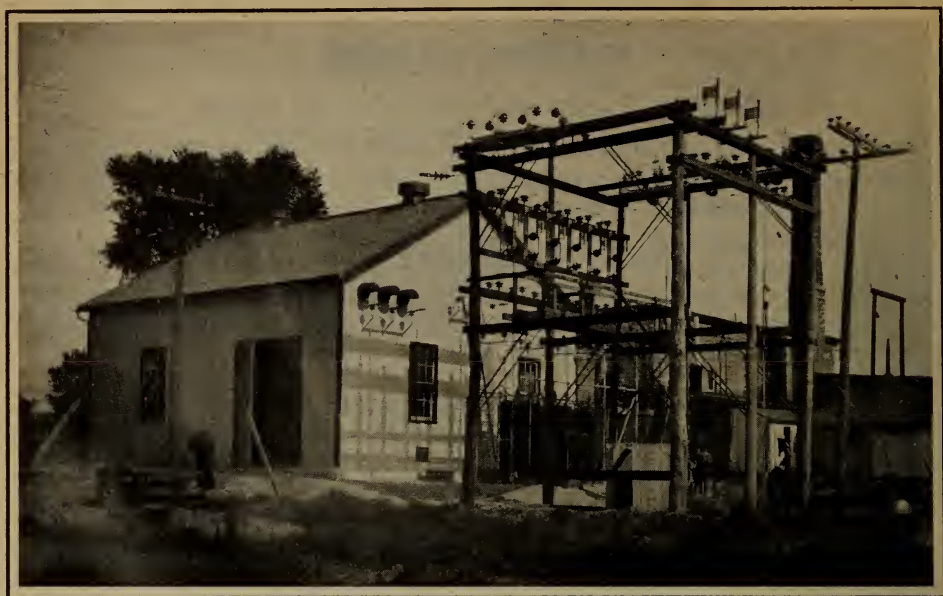
The station will be a two-pole structure with high-voltage equipment consisting of a Schweitzer and Conrad lightning-arrester, and the Commission's standard choke-coil, disconnecting-switch and fuse units. Power will be supplied from the 22,000-volt line now being constructed. One 300-kv-a., 3-phase, 60-cycle, 22,000/2,300-4,000-volt transformer purchased from the Moloney Electric Company will supply power at 4,000 volts.

Drawings are being prepared and the station should be in service in January, 1924.

### **MOUNT FOREST FREQUENCY CHANGER STATION**

In order to obtain additional power to supply the increasing load on the Eugenia and Severn systems, it was decided in June to install a frequency-changer set to connect with the Niagara system. A set of 1,150-kv-a. capacity on the 25-cycle end and 1,000-kv-a. on the 60-cycle end, with direct-connected exciter and starting motor, and one bank of three single-phase 350-kv-a., 25-cycle, water-cooled transformers, were available at the Cooksville frequency changer station. This equipment was no longer required at this point, as the Erindale plant had been closed down.





MOUNT FOREST FREQUENCY CHANGER STATION

Authorization was given in June, 1923, to proceed with the transfer of the Cooksville equipment, the purchase of the necessary new equipment and the installation of the same in a building to be erected on the existing Mount Forest distributing station site. The work was completed by the Construction department and the station placed in service October 2, 1923.

The building is 34 feet by 34 feet inside dimensions. The frame is wood with sheet metal clapboard siding and Spanish tile metal roofing. The high-voltage equipment is mounted on a six-pole structure.

This station receives power from the Niagara system over an extension of the 26,400-volt line from Harriston.

Power is fed in from the Niagara system through an air-break switch, choke-coil and fuse, the line being protected by Schweitzer and Conrad lightning-arresters. From the structure, the 26,400-volt line is carried into the station to the 25-cycle bank of transformers and the voltage is stepped down to 2,300, the normal operating voltage of the 25-cycle machine. The 60-cycle unit was formerly connected for 13,200-volt operation and the windings were reconnected by the Operating department for 2,300 volts prior to moving the set to Mount Forest. Power is fed from the 60-cycle unit to the Eugenia system through a bank of three 300-kv-a. 22,000/2,300-volt, 60-cycle, self-cooled, outdoor-type transformers, purchased from the Moloney Electric Company for this installation. These transformers are installed on a concrete platform immediately to the rear of the buildings, and power is fed through choke-coil and fuse units to a common 22,000-volt bus, which is tapped through air-break switches to the two Eugenia lines. One 22,000-volt Schweitzer and Conrad arrester was purchased for one of the 60-cycle lines and installed on the roof of the adjacent distributing station. The oxide-film arrester on the common Mount Forest distributing station bus was moved to a front wall location, and connected outside the station disconnecting-switches to the other Eugenia line. Protection is thus given at all times to the two Eugenia lines.

Power supplied from the Niagara system is measured by a graphic watt-meter, graphic reactive-volt-ampere meter, and a kilowatt-hour meter with instrument-transformers located in the 25-cycle, 2,300-volt leads from the transformer bank to the 25-cycle unit of the set.

A cooling pond, 8 feet by 8 feet and 3 feet deep, and tower were erected at the rear of the station for the transformer cooling water, a 20-gallon-per-minute pump being installed to circulate this water.

## **WASDELLS SYSTEM**

### **WASDELLS GENERATING STATION**

The new shaft, upper guide bearing and ball thrust bearing for No. 1 generator was installed during November, 1922. Authorization for the purchase of this equipment had been given in April, 1922, but delivery was not made until October, 1922.

#### **Pinedale Distributing Station**

Authorization was given in May, 1923, for the construction of a 75-kv-a., 22,000-volt, rural-class, distributing station on a site, 30 feet by 50 feet, purchased by the Commission at Pinedale. Plans were prepared and forwarded to the Construction department on June 27, 1923, with instructions to carry out this work.

This station is located on the 22,000-volt line between Cannington and Greenbank stations. The high-voltage equipment consists of the Commission's standard choke-coil, disconnecting-switch and fuse units mounted on a two-pole structure. A 75-kv-a., 3-phase, 60-cycle, 22,000/4,000-volt transformer was purchased from the Moloney Electric Company. The load is measured by an indicating, maximum-demand meter. The station was placed in service September 7, 1923.

## **MUSKOKA SYSTEM**

### **SOUTH FALLS GENERATING STATION**

Some preliminary engineering work has been done on an extension to this station.

## **ST. LAWRENCE SYSTEM**

### **CORNWALL TRANSFORMER STATION**

To provide more complete records, arrangements have been made to install a graphic frequency-meter.

A spare 100-kv-a. service transformer was purchased from the Canadian General Electric Company. It is a duplicate unit of those at present installed in the station.

An emergency exit and stairs were provided for the operators.

A water-pump was purchased from John T. Hepburn, Limited to supply cooling water to the transformers when the canal is emptied.

#### **Chesterville Distributing Station**

The installation of the switching equipment, to separate the rural circuit out of Chesterville from the town feeder, was completed during April, 1923.

### **Cornwall Glengarry Pulp Company Metering Station**

The graphic-recording wattmeter and reactive-volt-ampere meters were replaced with graphic meters of a more suitable type, the latter being placed in service on September 24, 1923.

### **Cornwall Howard Smith Paper Company Distributing Station**

The installation of the additional low-voltage feeders, mentioned in the previous Annual Report, was completed during November, 1922.

The 750-kv-a. transformer is being replaced by a second 1,500-kv-a. unit. Low-voltage and station service switching equipment is also being installed. The work should be completed early in 1924.

### **Martintown Distributing Station**

High-voltage lightning-arresters (Schweitzer and Conrad) were installed and placed in service July 11, 1923.

### **Prescott Distributing Station**

Disconnecting-switches were installed on the 300-kv-a. transformer, low-voltage feeder.

## **ST. LAWRENCE SYSTEM RESERVE EQUIPMENT**

One 300-kv-a., 3-phase, 60-cycle, outdoor-type, 44,000/2,400-volt transformer was purchased from the Moloney Electric Company as a system spare transformer. It was delivered during September, 1923, and stored at the site of the Cornwall Howard Smith Paper Company distributing station.

## **RIDEAU SYSTEM**

### **CARLETON PLACE GENERATING STATION**

As it was found necessary to operate the Carleton Place generating station to augment the power supply on the Rideau system, metering equipment was installed to meter the power generated.

### **HIGH FALLS GENERATING STATION**

During April, 1923, the third exciter was equipped with an equalizing rheostat in order to stabilize the voltage of the station under different conditions of operation. A graphic voltmeter was connected up temporarily and having proven satisfactory will be installed permanently.

Owing to a request for power from W. R. Geddes and the summer cottagers at Dalhousie lake, a single-phase, 2,300-volt feeder is being connected to the service transformer high-voltage bus.

### **SMITH FALLS GENERATING STATION**

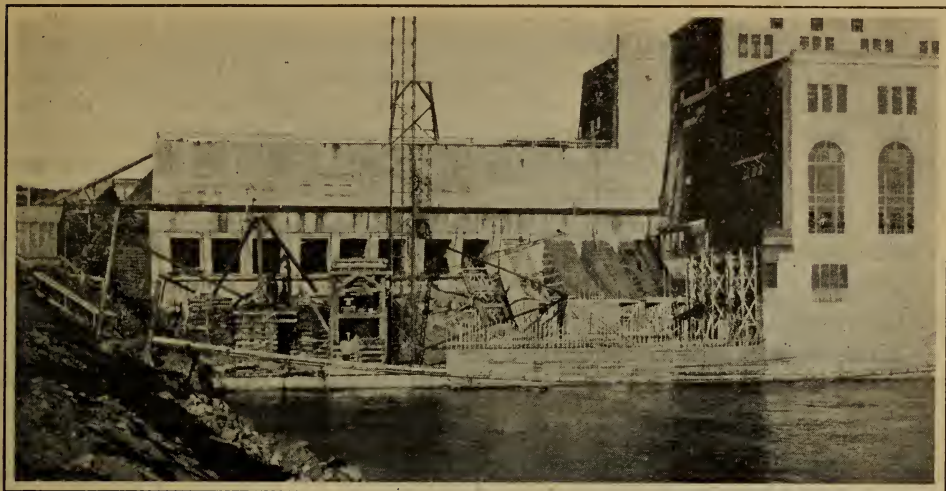
Arrangements have been made to install protective-screens around the high-voltage arresters.

## **THUNDER BAY SYSTEM**

### **NIPIGON GENERATING STATION EXTENSION**

Due to the increase in the demand for power on the Thunder Bay system, authorization was given in May, 1923, to extend the present Nipigon generating station and to install two additional 10,600-kv-a. generators with the necessary





#### NIPIGON POWER DEVELOPMENT

Form work for generating units Nos. 3 and 4, showing progress on November 4, 1923

transformers and switching equipment. The first of these additional units is to be ready for service in May, 1924.

#### Building

The extension to the building will be approximately 90 feet long and will follow the same architectural design as the existing station outlined in the 1921 Annual Report.

The structural steel, approximately 250 tons, was ordered from McGregor and McIntyre Limited, Toronto, July 16, 1923.

#### Electrical Apparatus

A contract for the supply and installation of two generators was awarded to the Canadian General Electric Company of Toronto, May 9, 1923. These new generators will be of similar rating to the two existing Westinghouse Company machines and will be complete with direct-connected exciter and voltage regulator. They will be equipped with 48-inch, spring-supported, thrust bearings.

On June 21, 1923, a contract was awarded to the Canadian General Electric Company for three 8,000-kv-a., 63,500/12,000-volt, single-phase, water-cooled transformers. They will be similar to the present transformers at this station. Three 250-kv-a., 12,000/2,300-575-volt, single-phase transformers were ordered from the Moloney Electric Company, August 23, 1923, to provide additional station-service capacity. A 75-kv-a., 575-volt, three-phase voltage regulator was ordered from the Canadian General Electric Company to maintain steady service voltage.

Four Westinghouse type "GA" electrically-operated, oil circuit-breakers were obtained from the Niagara system and are being rebuilt with improvements by the Canadian Westinghouse Company, Hamilton.

Seven Canadian Westinghouse Company type "C" electrically-operated, 12,000-volt, oil circuit-breakers were obtained from the Niagara transformer station where they had been held as reserve equipment.

One 125,000-volt, type "OF" oxide-film lightning-arrester was ordered from the Canadian General Electric Company. It will be connected to the second 110,000-volt transmission circuit.

### Electrical Layout

The general layout of the electrical apparatus for the extension will follow very closely the layout of the existing station outlined in the 1919 Annual Report.

The pocket for the future reactance coils, in the main transformer runway, will be used as a temporary location for the second bank of 250-kv-a. transformers until No. 5 and No. 6 generators are installed, when a permanent transformer pocket will be erected.

The new 75-kv-a. induction regulator, together with the necessary auxiliaries for its automatic operation, will be installed in the existing station in the No. 1 station-service transformer-bank pocket.

### Operators' Houses

To provide extra accommodation for the operators, instructions were given to the Operating department in September to reshingle, sheath and make other necessary repairs to three of the original temporary houses which were constructed for the use of the Engineering and Construction departments in the early stages of the development; also to equip the present houses with vestibules at rear entrance.

In October the Operating department was instructed to build a stable with a drive shed, also a boathouse at Alexandria landing.

## PORT ARTHUR TEMPORARY TRANSFORMER STATION EXTENSION

To take care of the increasing load on this station and the future power requirements in this district, authority was given in May, 1923, for the erection of an outdoor extension to the existing transformer station at Bare Point.

Three 5,000-kv-a., 63,500/22,000-volt transformers were ordered from the Canadian General Electric Company on May 28, 1923. These are similar to the existing transformers. They will form the second bank, which will be located on the west side of the existing station. The 110,000- and 22,000-volt busses and necessary electrical connections will be supported on a pole structure over these transformers.

The 110,000-volt bus in the existing station will be extended through 110,000-volt wall bushings to the new outdoor structure. Three 110,000-volt outdoor disconnecting-switches will be installed to sectionalize the bus between the two transformer banks.

Two Canadian Westinghouse Company type "GA3" outdoor, 22,000-volt, oil circuit-breakers, originally purchased for temporary service at Hamilton transformer station, will be installed at the outdoor structure. One of these will be used as a transformer breaker and the other on the new 22,000-volt feeder to be constructed by the municipality.

The 22,000-volt bus in the present station will be extended through the west wall, through wall bushings. The bus will be sectionalized with disconnecting switches.

A Canadian Westinghouse Company indoor-type "GA3", 22,000-volt oil circuit-breaker will be installed between the existing 5,000-kv-a. transformer bank and the main 22,000-volt bus in the present station.

A control panel for the new transformer bank will be added to the existing switchboard in the present station while the panel to control the new 22,000-volt feeder will be installed in the pumping station, adjoining the present feeder panels.

The present water system for the cooling of the transformers will be extended to accommodate the new bank.



### **Port Arthur Distributing Station (High Street)**

On April, 27, 1923, authorization was given to install a graphic wattmeter and reactive-volt-ampere meter at this station in order to measure the total load on the transformer bank, also to erect a partition for an office for the operators. The work was completed October 7, 1923.

## **OTTAWA SYSTEM**

The extension to the metering equipment, which was noted in last year's Annual Report, was completed in January, 1923, but due to a further increase in the load, another feeder was installed by the municipal authorities. This necessitated a further extension to the Commission's metering equipment to totalize the load on the system. This work is being proceeded with.

## **CENTRAL ONTARIO AND TRENT SYSTEM**

### **Auburn Switching Station**

The present station is to be extended to provide for the installation of an oil circuit-breaker and two 44,000-volt, outdoor-type, potential transformers in connection with the 44,000-volt line now being built to the new Peterborough substation. The drawings have been completed and construction work will commence early in November.

### **Belleville Cement Company Distributing Station**

One 750-kv-a. transformer was removed from this station as the Cement mills are at present closed down. It was taken to the Belleville Lehigh Cement Company distributing station, together with the high- and low-voltage switching equipment which had been used with it.

### **Belleville-Lehigh Cement Company Distributing Station**

The fifth 750-kv-a. transformer was installed in this station to take care of the growth in the Cement Company's load. The transformer and its switching equipment was obtained from the Belleville Cement Company's distributing station. The transformer was installed in the erection-bay and some of the former switching equipment was rearranged. This work was completed during April, 1923.

Additional relay-protection is being installed, consisting of a third current-transformer in each high-voltage line and one set of relays.

### **Bowmanville Distributing Station**

The distribution voltage of this station was changed from 2,400 to 4,160 in September by the Operating department. The feeders were equipped with three ammeters each and the breakers were provided with battery trip.

### **Brighton Distributing Station**

A Lincoln demand meter was installed to supplement the former equipment owing to it being inadequate. It was placed in service during March, 1923.

### **Canada Boxboard Company Distributing Station**

The graphic-recording wattmeter and reactive-volt-ampere meter at this station have not been satisfactory and work is under way to replace them by graphic meters of a more suitable type.



### DAM No. 8 GENERATING STATION

In order to meet the increasing demand for power on the Central Ontario and Trent system, authorization was given on March 1, 1923, to develop the power site at Dam No. 8 on the Trent canal.

A departure from the usual practice is being made and a generator and its step-up transformer will be connected as a unit with no low-voltage bus or oil circuit-breakers between. There is, however, a low-voltage emergency transformer bus which permits, by the operation of disconnecting switches, any generator being connected to any transformer.

The superstructure will be built of stone obtained locally, similar to Ranney Falls generating station. This building will house the generators and the low-voltage switching only, as the transformers and all the high-voltage switching will be installed outdoors. The total installation will comprise three units.

The generators, which will be 2,000-kv-a., 6,600-volt, 3-phase, 60-cycle at 150 r.p.m., vertical-type units with direct-connected exciter, have been ordered from the Swedish General Electric Limited, and will be delivered and installed early in 1924.

The transformers have been ordered from the Packard Electric Company and are 2,000-kv-a., 3-phase, 60-cycle, 6,600/44,000-volt, self-cooled units. They are scheduled for delivery in December, 1923.

As this station and also the one at Dam No. 9 are close to Ranney Falls generating station, investigations are being made in an endeavour to make it a remote controlled automatic station with the control point at Ranney Falls generating station.

This station should be ready for service during the summer of 1924.

Plans and specifications for an 8-roomed cottage for the operators were prepared in July and the contract let to Messrs. Blue and Mitchell, of Campbellford, Ontario, in September. Fifty per cent of the construction work is complete.

### DAM No. 9 GENERATING STATION

As a further source of power for the Central Ontario and Trent system, authorization was given on March 22, 1923, to develop the power site at Dam No. 9 located about  $1\frac{1}{2}$  miles below Ranney Falls. As in the case of Dam No. 8, which is another  $1\frac{1}{2}$  miles down stream, investigations are under way to make this a remote controlled automatic station with the control point at Ranney Falls generating station. The total installation will comprise three units.

Tenders have been called for on the generators, transformers and switching equipment.

The generators will be 1,400-kv-a., 3-phase, 60-cycle, 6,600-volt, vertical-type units with direct-connected exciters. The transformers will be a corresponding size to step up the voltage to 44,000 volts.

It is the intention to build the superstructure of native stone similar to Ranney Falls generating station. This will house only the generators and the low-voltage switching. The transformers and high-voltage switching will be installed outdoors.

This station should be ready for service during the fall of 1924.

### Deloro Switching Station

The relay-protection at this station was augmented so that the tap line to Deloro could be sectionalized in case of trouble. A third high-voltage current-transformer and two new relays were installed, being placed in service on October 7, 1923.

### **FRANKFORD GENERATING STATION**

Hand brakes are being installed on the four generators.

The protective scheme in this station is being augmented by the replacing of the original relays which were obsolete and inadequate by new ones. This change will improve the operation of the plant.

### **HEELY FALLS GENERATING STATION**

In February authorization was given to complete the surfacing of the generator-room floor. Floor tile was laid around generator No. 4 to match the tile around the other generators. No. 1 generator section and the erection room were given a concrete finish. The work was completed by the Construction department in June.

### **KINGSTON TRANSFORMER STATION**

A third current-transformer and ground relay is being installed on the incoming 44,000-volt circuit at this station.

#### **Lakefield Distributing Station**

A small electric heater was installed in the meter house.

#### **Lindsay Distributing Station**

The protection scheme on this station is being replaced. All the breakers in the station will be made suitable for 12-volt tripping.

#### **Madoc Gillespie Talc Mills Distributing Station**

Metering equipment that had been destroyed by a fire in this company's station was replaced during December, 1922.

#### **Madoc Switching Station**

The relay-protection at this station was augmented so that the tap line to Madoc could be sectionalized in case of trouble. A third high-voltage current-transformer and two new relays were installed, being placed in service on October 7, 1923.

#### **Norwood Distributing Station**

A small electric heater was installed in the meter house.

#### **Omemelee Distributing Station**

In March, 1923, fuses were installed on the low-voltage outgoing feeder, also a Lincoln demand-meter was installed to replace the graphic meter which had become defective.

### **PETERBOROUGH HYDRAULIC POWER COMPANY GENERATING STATION**

Some switching equipment was installed in order that this company could sectionalize its generating station and connect one of its generators to the Central Ontario and Trent system. A lightning-arrester was installed to give protection. The apparatus was placed in service during October, 1923.

#### **Peterborough Municipal Station**

At the request of the Peterborough Utilities Commission, plans and specifications were prepared and engineering assistance given for the construction





PETERBOROUGH MUNICIPAL STATION—November 1, 1923

of the new substation, to include space for two new motor-generator sets for the electric railway. The location is at the corner of Sherbrooke and Aylmer streets.

The building, the contract for which was placed with V. O. Hays, contractor, Peterborough, is being constructed with concrete foundations and red pressed-brick walls with stone trim at the main entrance. The main part of the station is 63 feet long, 39 feet wide and 37 feet high, while the section for the electric railway is 29 feet long, 39 feet wide and 24 feet high.

The contract for the supply and installation of the 4,000- and 2,400-volt switching equipment (with the exception of the 44,000-volt-line, oil circuit-breaker) was awarded to the Canadian General Electric Company. This equipment will consist of a 44,000-volt oxide-film arrester, and sixteen type-“K32” “BY” 15,000-volt, oil circuit-breakers with a twenty-one panel switch-board. The Canadian Westinghouse Company is supplying the 44,000-volt, type-“GA-3” line oil circuit-breaker.

The Packard Electric Company was awarded the contract for the three 1,500/800-kv-a., 44,000/2,400-volt, 3-phase transformers, which were tested by the Engineering department.

The building was ready on October 31, 1923, for the installation of the electrical equipment and the station should be ready for operation before December 31, 1923.

### **Peterborough Street Railway Station**

As the present street railway station is inadequate, and its equipment obsolete, it became necessary to provide a new station with modern equipment if continuity of service was to be assured. Plans and specifications were prepared for the installation of new equipment in a section of the new municipal substation now under construction.

The Canadian General Electric Company was awarded the contract for the motor-generator set and its switching and metering equipment. This set



comprises a 1,500-kv-a., 2,400-volt synchronous motor direct-connected to a 500 kw., 575-600-volt interpole generator. A 12-kw., 125-volt, shunt-wound exciter is directly coupled to the shaft. The motor is suitable for reconnection for 4,160-volts.

The Commission will install the totalizing meters, the leads from the main and emergency bus of the municipal station to the bus of the street railway station and the d-c. feeder from the station to the terminal pole structure on Aylmer street.

The building was ready on October 31, 1923, for the installation of the electrical equipment, which should be in operation early in 1924.

### **SIDNEY GENERATING STATION**

Three generators are being equipped with hand brakes, the fourth one being already equipped with an experimental brake.

Added protection on the 6,600-volt feeders to the terminal station is being installed replacing the original protection installed in 1911, as it was obsolete and inadequate.

#### **Sidney Terminal Station**

The telephone equipment here has been duplicated in the generating station and an alarm has been installed in the latter to signal the opening of the low-voltage switches. This arrangement makes possible the operation of this station by the generator-station attendants.

Added relay protection is being provided on the incoming feeders from both Sidney and Frankford generating stations, also on the transformer low-voltage feeders.

### **Trenton Chemical Products Company Distributing Station**

The graphic meters in this station were replaced by a Lincoln demand meter, which was placed in service during February, 1923.

### **Warkworth Distributing Station**

A station to supply the village of Warkworth was constructed at Bradley's Corner and fed from the 44,000-volt tie-line between Heely Falls generating station and Trenton transformer station. It is a rural type equipped with Schweitzer and Conrad arrester and a single-phase, 50-kv-a., Moloney Electric Company's transformer and was placed in service on September 29, 1923.

## **NIPISSING SYSTEM**

### **BINGHAM CHUTE GENERATING STATION**

The development at Bingham Chute, mentioned in the previous Annual Report, is under construction. A temporary station was erected, using a three-phase, 22,000-volt, 75-kv-a. transformer connected to the Nipissing system line, which had been extended to this plant to give power for the construction work.

The three 300-kv-a. transformers and one 450-kv-a. generator which had been released from Nipissing generating station, having been replaced by larger capacity units, were moved to Bingham Chute early in 1923 over the winter roads and stored on the site. They are now being installed and the station should be ready for service early in December, 1923.

Authorization was given in October, 1923, for the removal of the feeder panel now installed in Powassan distributing station to the Bingham Chute generating station and its installation in conjunction with Bingham Chute switchboard, also the purchase and installation of necessary switching equipment.

The 300-ampere circuit-breaker, being removed from Nipissing generating station transformer feeder, will replace the existing non-automatic, oil circuit-breaker on this feeder, and as soon as this change is made the work will proceed.

Authorization was given on August 20, 1923, to purchase a brick house and approximately two acres of land adjacent to the Bingham Chute generating station site and also to construct a five-roomed, one-storey house. These will be used as operators' houses.

The property was purchased in August, 1923, and the contract for building the new house was awarded to Marquah Bros., of Callander, in September. This house should be ready for use in December.

### NIPISSING GENERATING STATION

The demand for power on the Nipissing system has necessitated the replacement of the second 450-kv-a. generator in the Nipissing generating station with a larger unit. Authorization was given on April 26, 1923, to remove this 450-kv-a. generator and to purchase and install a 1,250-kv-a. unit in its place. Also to replace the present 300-ampere, oil circuit-breaker with one of 600-ampere capacity.

An order for one 1,250-kv-a. generator was placed with the Swedish General Electric, Limited, Toronto, on June 8, 1923.

It will not be possible to remove the 450-kv-a. generator until the first unit at the Bingham Chute generating station is in operation. However, all preparations for this change are being made and the 1,250-kv-a. generator should be in service early in 1924.

### NORTH BAY GENERATING STATION No. 2

Authorization was given to construct a Diesel engine plant on the Commission's gas-house property at the corner of Cassell and Worthington streets. The station will be used only as a standby and will feed into the North Bay distributing system at 2,200 volts. The existing brick building was remodelled and enlarged into a building 57 feet 3½ inches by 49 feet 7½ inches by 17 feet 10 inches high with reinforced concrete roof, using brick salvaged from the North Bay steam plant. A portion of the building will be used for a garage and storeroom, while the remainder will house the Diesel engines, generators and switching equipment.

#### Diesel Engines

Two used 300-horsepower, 500-r.p.m., 2-cycle, 6-cylinder marine Diesel engines, of New London Ship and Engine Company manufacture, were purchased in May, 1923. These engines will be given complete inspection and overhauling before being placed in operation. One engine will be direct connected to a 300-kv-a., 60-cycle, 2,300-volt, 450-r.p.m. generator, and the other will be belted to a 250-kv-a., 2,300-volt, 60-cycle, 600-r.p.m. generator.

Governors for both engines were purchased from the New London Ship and Engine Company in August and should be available in December, 1923.

An air compressor suitable for 1,000 pounds air pressure, with a piston displacement of 11.1 cubic feet per minute and driven by an 8-horsepower gasoline engine was purchased from the Canadian Ingersoll Rand Company



in September, 1923. This compressor will supply the air to the starting bottles which are used for starting the engines.

Two 6,600-gallon, fuel-oil storage-tanks were purchased from the Toronto Iron Works in September and will be installed outdoors. The fuel oil will be heated, around the pump suction-pipe, by circulating engine cooling water through coils located inside the tanks.

A double suction water pump, with a capacity of 170 imperial gallons per minute under 100-foot head and 10-foot suction, driven by a 10-horsepower, 1,800-r.p.m., 110-volt, three-phase motor, was purchased, for circulating cooling water through the engine to a cooling pond and tower at the rear of the building.

#### **Generators**

One 300-kv-a. generator originally belt driven and salvaged from the North Bay steam plant, after rebuilding, will be direct connected to one engine. A one and one-half ton flywheel and flexible coupling were purchased in August for this unit, the flywheel being pressed on the generator shaft replacing the original driving pulley. This flywheel is necessary in order to obtain smooth running of the engine.

One 250-kv-a., belt-driven generator was transferred from the Nipigon construction station, and will be belt connected to the second engine. A similar flywheel was purchased for this unit and is suitable for use as a pulley. This flywheel is direct-connected to the engine shaft, and is supported by an outboard bearing purchased for this purpose. A 25-inch, 3-ply leather belt will be used for driving the generator.

Switch-board equipment is being obtained from the Commission's stores. The first engine will be ready for service in January, 1924.

### **NORTH BAY STEAM PLANT**

On July 3, 1923, the North Bay steam plant was seriously damaged by fire. The equipment comprised three steam engines, three generator units with exciters, complete switchboard units and four steam boilers. The engine and generator room was totally destroyed and the boiler room slightly damaged.

The loss of this plant created a serious operating condition on the Nipissing system, as its capacity was required at low water periods on the South river.

Although the construction of the Bingham Chute development will furnish additional power, a reserve station in North Bay is necessary and the destroyed steam station is being replaced by a Diesel oil-engine station.

Two of the damaged generators, one rated at 300-kv-a. and one at 150-kv-a. were carefully examined and it was decided to have them rebuilt. This work is now being done by the Sterling Electric Company of St. Catharines. The 300-kv-a. unit will be used in the new Diesel engine station, while the 150-kv-a. unit will be held in reserve. The balance of the damaged equipment, also the boilers, have been sold. Some of the building material from the boiler house will be used in the new station.

### **Powassan Distributing Station**

Authorization was given on September 21, 1923, to dismantle the Powassan distributing station. This work will be undertaken as soon as Bingham Chute generating station has been placed in service and power is being supplied to Powassan from the generator 2,300-volt bus.

The metal building will be used as a storehouse for material on the Nipissing system and should be available in January, 1924.



## TABLE OF TRANSFORMING STATION

The particulars given in this table refer to all transforming stations owned or operated by the Hydro-Electric Power Commission of Ontario on October 31, 1923.

Under the columns headed "Circuits" are given the complete number and voltage of circuits of all kinds which enter or leave a station except certain feeders that are not the property of the system.

Under "active" transformers are given all transformers actually in operation and in reserve except service transformers.

Station				Circuits			
System number	Name	Date placed in operation	Type of building	High voltage		Low voltage	
				Volts	No.	Volts	No.
NIAGARA							
N 1	Niagara.....	Aug. 1910	T.S. brick	110,000	4	12,000	12
N 1	".....	Aug. 1914	T.S. brick	.....	.....	.....	.....
N 1	".....	Aug. 1914	T.S. brick	46,000	4	.....	.....
N 152	Beamsville dist. sta.....	Jan. 1923	P. outdoor	12,000	1	4,000	1
N 142	Chippawa dist. sta.....	Jan. 1923	P. outdoor	12,000	1	4,000	2
N 153	Grimsby dist. sta.....	Dec. 1922	P. outdoor	12,000	1	4,000	1
N 2	Dundas trans. sta.....	Sept. 1910	T.S. brick	110,000	12	13,200	6
N2D 31	Dundas rural dist. sta.....	May 1923	P. outdoor	13,200	1	4,000	2
N 237	Caledonia dist. sta.....	Sept. 1912	C. brick	13,200	1	2,300	2
N 239	Hagersville dist. sta.....	Aug. 1913	D. brick	13,200	1	4,000	2
						2,300	1
N 234	Lynden dist. sta.....	Sept. 1915	E. brick	13,200	1	4,000	2
N 235	Waterdown dist. sta.....	April 1915	customer	13,200	1	2,300	3
N 3	Toronto, Strachan Ave. trans. sta.....	Feb. 1911	T.S. brick	110,000	3	13,200	31
N 4	London trans. sta.....	Nov. 1910	T.S. brick	110,000	5	13,200	8
N 442	Ailsa Craig dist. sta.....	Jan. 1916	E. brick	13,200	1	4,000	2
N 432	Delaware dist. sta.....	Mar. 1915	E. brick	13,200	1	4,000	3
N 439	Dorchester dist. sta.....	Dec. 1914	E. brick	13,200	1	4,000	3
N 443	Exeter dist. sta.....	May 1916	D. brick	13,200	1	4,000	4
N 440	Lucan dist. sta.....	Feb. 1915	E. brick	13,200	1	4,000	2
N 5	Guelph trans. sta.....	Sept. 1910	T.S. brick	110,000	3	13,200	5
N 537	Acton dist. sta.....	Dec. 1912	B. brick	13,200	1	2,300	2
N 538	Cheltenham dist. sta.....	July 1914	D. brick	13,200	1	575	1
N 533	Elora dist. sta.....	Nov. 1914	E. brick	13,200	1	4,000	1
N 534	Fergus dist. sta.....	Nov. 1914	E. brick	13,200	1	2,300	1
N 539	Georgetown dist. sta.....	Aug. 1913	D. brick	13,200	1	4,000	2
N 536	Rockwood dist. sta.....	Aug. 1913	P. outdoor	13,200	1	2,300	1
N 6	Preston trans. sta.....	Sept. 1910	T.S. brick	110,000	3	13,200	6
N6D 31	Preston rural dist. sta.....	Mar. 1919	in Preston T.S.	13,200	1	4,000	1
N 7	Kitchener trans sta.....	Sept. 1910	T.S. brick	110,000	2	13,200	8
N 735	Baden dist. sta.....	May 1912	special	13,200	1	4,000	2
N 734	Elmira dist. sta.....	Oct. 1913	D. brick	13,200	1	4,000	1
N 737	New Hamburg dist. sta.....	Feb. 1911	special	13,200	1	2,300	2e
N 733	St. Jacobs dist. sta.....	Sept. 1917	P. outdoor	13,200	1	4,000	2
N 8	Stratford trans. sta.....	Nov. 1911	T.S. brick	110,000	2	26,400	6
N 834	Dublin dist. sta.....	Oct. 1917	P. outdoor	26,400	1	4,000	1
N 841	Harriston dist. sta.....	June 1916	H. brick	26,400	1	4,000	1
N 839	Listowel dist. sta.....	May 1916	special	26,400	1	4,000	1
N 838	Milverton dist. sta.....	May 1916	H. brick	26,400	1	4,000	1
N 840	Palmerston dist. sta.....	June 1916	H. brick	26,400	1	4,000	3a
N 832	Tavistock dist. sta.....	Oct. 1916	special	26,400	1	575	2

Note.—For subnotes *a, b, c*, etc., see end of table.

DETAILS AS OF OCTOBER 31, 1923

Transformers designated as "spare" are extra units at the station ready for emergency use, whereas those referred to as "reserve" are available for use in stations where and when increased capacity is required.

The total kv-a. of all transformers is 1,131,350 kv-a. made up of 949,870 kv-a. in operation, 80,310 kv-a. in reserve and 101,170 kv-a. spare.

There are 930,335 kv-a. of 25-cycle transformers and 201,015 kv-a. of 60-cycle units, making together the total of 1,131,350.

Transformers										
Active							Spare			
No. of banks	No. of units	Make of units	Unit kv-a.	Phase rating of unit	Total kv-a.	Banks connected		Single phase except where otherwise stated		
						H.V.	L.V.	No.	Make	Unit kv-a.

SYSTEM—25 CYCLES

5	15	C.W. Co.	3,500	1	52,500	Y	Δ	7	C.W. Co.	3,500
4	12	C.W. Co.	7,500	1	90,000	Y	Δ	...	...	...
3	9	C.G.E. Co.	3,500	1	31,500	Y	Δ	1	C.G.E. Co.	3,500
1	1	P.E. Co.	300	3	300	Δ	Y	...	...	...
1	1	P.E. Co.	300	3	300	Δ	Y	...	...	...
1	1	P.E. Co.	300	3	300	Δ	Y	...	...	...
1	3	C.W. Co.	5,000	1	15,000	Y	Δ	...	...	...
1	1	P.E. Co.	300	3	300	Δ	Y	...	...	...
2	2	C.C.W. Co.	300	3	600	Δ	Δ	...	...	...
1	3	C.C.W. Co.	150	1	450	Δ	Y	...	...	...
1	1	P.E. Co.	300	3	300	Δ	Δ	...	...	...
1	3	C.W. Co.	75	1	225	Δ	Y	...	...	...
1	3	C.C.W. Co.	75	1	225	Δ	Δ	...	...	...
6	18	C.G.E. Co.	5,000	1	90,000	Y	Δ	...	...	...
2	6	C.G.E. Co.	5,000	1	30,000	Y	Δ	1	C.G.E. Co.	5,000
1	3	C.W. Co.	75	1	225	Δ	Y	...	...	...
1	3	P.E. Co.	25	1	75	Δ	Y	...	...	...
1	3	C.W. Co.	75	1	225	Δ	Y	...	...	...
1	3	C.G.E. Co.	100	1	300	Δ	Y	...	...	...
1	3	C.G.E. Co.	75	1	225	Δ	Y	...	...	...
1	3	G.E. Co.	2,500	1	7,500	Y	Δ	1	C.G.E. Co.	2,500
1	3	C.W. Co.	75	1	225	Δ	Δ	...	...	...
1	3	C.G.E. Co.	75	1	225	Δ	Δ	...	...	...
1	3	C.W. Co.	75	1	225	Δ	Y	...	...	...
1	3	C.G.E. Co.	75	1	225	Δ	Δ	...	...	...
2	2	P.E. Co.	300	3	600	Y	Y	...	...	...
1	3	C.G.E. Co.	25	1	75	Δ	Δ	...	...	...
2	6	G.E. Co.	1,250	1	7,500	Y	Δ	1	G.E. Co.	1,250
1	3	P.E. Co.	75	1	225	Y	Δ	...	...	...
1	3	C.G.E. Co.	1,250	1	3,750	Y	Δ	...	...	...
1	3	C.W. Co.	2,500	1	7,500	Y	Δ	1	C.W. Co.	2,500
1	3	C.C.W. Co.	150	1	450	Δ	Y	...	...	...
1	3	C.G.E. Co.	150	1	450	Δ	Y	...	...	...
1	3	P.E. Co.	75	1	225	Δ	Δ	...	...	...
1	1	M.E. Co.	75	3	75	Δ	Δ	...	...	...
2	6	C.W. Co.	1,250	1	7,500	Y	Δ	1	C.W. Co.	1,250
1	1	M.E. Co.	50	3	50	Δ	Y	...	...	...
1	3	C.G.E. Co.	75	1	225	Δ	Y	...	...	...
1	3	C.G.E. Co.	200	1	600	Δ	Y	...	...	...
1	3	C.G.E. Co.	150	1	450	Δ	Y	...	...	...
1	3	C.G.E. Co.	75	1	225	Δ	Y	...	...	...
1	3	C.C.W. Co.	75	1	225	Δ	Δ	...	...	...

## TABLE OF TRANSFORMING STATION

Station				Circuits			
System number	Name	Date placed in operation	Type of building	High voltage		Low voltage	
				Volts	No.	Volts	No.
NIAGARA							
N 9	St. Marys trans. sta. . . . .	April 1911	T.S. brick	110,000	2	13,200	2
N 932	St. Marys Cement Co., dist. sta. . . . .	Sept. 1912	special. . . . .	13,200	1	575 575	1 1
N 10	Woodstock trans. sta. . . . .	Nov. 1911	T.S. brick	110,000	3	13,200	6
N1034	Beachville dist. sta. . . . .	July 1912	D.L. brick	13,200	1	2,300	2
N1033	Embros dist. sta. . . . .	Dec. 1914	E. brick	13,200	1	4,000	1
N1036	Norwich dist. sta. . . . .	Mar. 1912	special	13,200	1	2,300	2
N 11	St. Thomas trans. sta. . . . .	Feb. 1912	T.S. brick	110,000	4	13,200	8
N1138	Aylmer dist. sta. . . . .	Feb. 1915	special	13,200	1	4,000	2
N1134	Dutton dist. sta. . . . .	Aug. 1915	E. brick	13,200	1	4,000	1
N1133	London & Pt. Stanley Ry. . . . .	June 1915	in St. Thomas T.S.	13,200	3	920	3
N1137	Port Stanley dist. sta. . . . .	Mar. 1912	B. brick	13,200	1	2,300	1
N1131	St. Thomas rural dist. sta. . . . .	July 1923	outdoor	13,200	1	4,000	1
N1135	West Lorne dist. sta. . . . .	Dec. 1916	E. brick	13,200	1	4,000	2
N 12	Brant trans. sta. . . . .	Jan. 1914	T.S. brick	110,000	4	26,400	6
N1240	Ayr dist. sta. . . . .	Dec. 1914	H. brick	26,400	1	4,000	2
N1234	Burford dist. sta. . . . .	May 1915	H. brick	26,400	1	4,000	1
N1241	Drumbo dist. sta. . . . .	Dec. 1914	H. brick	26,400	1	4,000	3
N1247	Norfolk dist. sta. . . . .	Jan. 1923	P. outdoor	26,400	1	4,000	1
N1233	St. George dist. sta. . . . .	Sept. 1915	in Brant T.S.	4,000	1	230	1
N1235	Waterford dist. sta. . . . .	May 1915	H. brick	26,400	1	4,000	2
N 13	Cooksville trans. sta. . . . .	Nov. 1911	T.S. brick	110,000	3	13,200	8
N1331	Port Credit dist. sta. . . . .	Aug. 1912	B. brick	13,200	1	4,000	2
N1339	Streetsville dist. sta. . . . .	Nov. 1913	D. brick	13,200	2	2,300	2
N1340	Toronto Twp. dist. sta. . . . .	Nov. 1911	in Cooksville T.S.	13,200	1	2,300	1
N 14	Kent trans. sta. . . . .	Aug. 1914	T.S. brick	110,000	4	26,400	6
N1434	Blenheim dist. sta. . . . .	Oct. 1915	H. brick	26,400	1	4,000	1
N1438	Bothwell dist. sta. . . . .	Aug. 1915	H. brick	26,400	1	4,000	2
N1442	Brigden dist. sta. . . . .	Dec. 1917	P. outdoor	26,400	1	575	1
N1440	Dresden dist. sta. . . . .	Mar. 1915	H. brick	26,400	1	4,000	1
N1455	Fletcher dist. sta. . . . .	Dec. 1922	P. outdoor	26,400	1	4,000	2
N1445	Forest dist. sta. . . . .	Feb. 1917	H. brick	26,400	1	4,000	2
N1441	Oil Springs dist. sta. . . . .	Dec. 1917	P. outdoor	26,400	1	4,000	3
N1448	Perch dist. sta. . . . .	Nov. 1922	outdoor	26,400	1	575	1
N1443	Petrolia dist. sta. . . . .	April 1916	G. brick	26,400	2	4,000	5b
N1435	Ridgetown dist. sta. . . . .	Dec. 1915	H. brick	26,400	1	4,000	3a
N1437	Thamesville dist. sta. . . . .	Oct. 1915	H. brick	26,400	1	4,000	1
N1432	Tilbury dist. sta. . . . .	April 1915	G. brick	26,400	1	4,000	2
N1439	Wallaceburg dist. sta. . . . .	Feb. 1915	G. brick	26,400	1	4,000	5bn
N1446	Watford dist. sta. . . . .	Sept. 1917	P. outdoor	26,400	2	4,000	2
N 15	Essex trans. sta. . . . .	Aug. 1914	T. S. brick	110,000	2	26,400	8
N1538	Belle River dist. sta. . . . .	Dec. 1922	P. outdoor	26,400	1	4,000	2
N1533	Can. Salt Co., dist. sta. . . . .	Nov. 1917	special	26,400	2	176	2
J 2	Amherstburg dist. sta. . . . .	Feb. 1919	special	26,400	2	4,000	3a
J 1	Canard River dist. sta. . . . .	Jan. 1914	P. outdoor	26,400	1	115 230	1

Note.—For subnotes *a*, *b*, *c*, etc., see end of table.



## DETAILS AS OF OCTOBER 31, 1923—Continued

Transformers										
Active								Spare		
No. of banks	No. of units	Make of units	Unit kv-a.	Phase rating of unit	Total kv-a.	Banks connected		Single phase except where otherwise stated		
						H.V.	L.V.	No.	Make	Unit kv-a.
SYSTEM—25 CYCLES—Continued										
1	3	G.E. Co.	750	1	2,250	Y	△	4	G.E. Co.	3,000
1	3	C.G.E. Co.	500	1	1,500	△	△			
1	1	P.E. Co.	1,500	3	1,500	△	△			
1	3	C.G.E. Co.	2,500	1	7,500	Y	△	2	C.G.E. Co.	1,250
1	3	P.E. Co.	150	1	450	△	△			
1	1	P.E. Co.	50	3	50	△	Y			
1	3	P.T. Co.	150	1	450	△	△			
2	6	G.E. Co.	750	1	4,500	Y	△	1	G.E. Co.	750
1	3	P.E. Co.	75	1	225	△	Y			
1	3	C.W. Co.	75	1	225	△	Y			
3	9	C.W. Co.	185	1	1,665	△	△			
1	3	C.G.E. Co.	100	1	300	△	△			
1	1	F.T. Co.	150	3	150	△	Y			
1	3	C.W. Co.	75	1	225	△	Y			
1	3	C.W. Co.	2,500	1	7,500	Y	△	1	C.W. Co.	2,500
1	3	C.G.E. Co.	75	1	225	△	Y			
1	1	M.E. Co.	75	3	75	△	Y			
1	3	C.G.E. Co.	75	1	225	△	Y			
1	1	P.E. Co.	300	3	300	△	Y			
{1	3	C.C.W. Co.	50	1	150	Y	△			
{1	3	G.E. Co.	50	1	150	Y	△			
1	3	C.W. Co.	75	1	225	△	Y			
1	3	G.E. Co.	1,250	1	3,750	Y	△	1	G.E. Co.	1,250
{1	3	C.G.E. Co.	75	1	225	△	Y			
{1	1	P.E. Co.	300	3	300	△	Y			
1	3	C.G.E. Co.	150	1	450	△	△			
1	3	Siemens	50	1	150	△	△			
{1	3	C.W. Co.	1,250	1	3,750	Y	△	4	C.G.E. Co.	2,500
{1	3	C.G.E. Co.	2,500	1	7,500	Y	△			
1	3	C.W. Co.	75	1	225	△	Y			
1	3	C.W. Co.	75	1	225	△	Y			
1	1	M.E. Co.	75	3	75	△	△			
1	3	C.W. Co.	75	1	225	△	Y			
1	1	P.E. Co.	150	3	150	△	Y			
1	3	C.C.W. Co.	75	1	225	△	△			
{1	1	M.E. Co.	75	3	75	△	Y			
{1	1	C.W. Co.	150	3	150	△	Y			
1	3	C.G.E. Co.	75	1	225	△	△			
1	3	P.E. Co.	300	1	900	△	Y			
1	3	P.E. Co.	150	1	450	△	Y			
1	3	C.W. Co.	75	1	225	△	Y			
1	3	C.G.E. Co.	100	1	300	△	Y	3	C.W. Co.	75
{1	3	C.G.E. Co.	150	1	450	△	Y			
{1	3	P.E. Co.	150	1	450	△	Y			
1	1	M.E. Co.	150	3	150	△	Y			
2	6	C.G.E. Co.	5,000	1	30,000	Y	△			
1	1	P.E. Co.	150	3	150	△	Y			
2	6	M.E. Co.	750	1	4,500	△	6●			
{1	3	P.E. Co.	100	1	300	△	Y			
{1	1	P.E. Co.	300	3	300	△	Y			
1	1	M.E. Co.	25	1	25					

TABLE OF TRANSFORMING STATION

Station				Circuits			
System number	Name	Date placed in operation	Type of building	High voltage		Low voltage	
				Volts	No.	Volts	No.
NIAGARA							
J 6	Cottam dist. sta.....	Oct. 1915	P. outdoor	26,400	1	{115 230	1
J 7	Essex dist. sta.....	Oct. 1914	P. outdoor	26,400	1	2,300	1
J 3	Harrow dist. sta.....	Jan. 1914	P. outdoor	26,400	1	2,300	1
J 4	Kingsville dist. sta.....	Jan. 1914	special	26,400	2	4,000	3
J 20	Leamington dist. sta.....	Aug. 1915	special	26,400	1	4,000	3
J 98-1	Essex County Sys. res. equip.....						
N 16	York trans. sta.....	Oct. 1919	outdoor	110,000	1	13,200	1
N1631	Etobicoke dist. sta.....	Sept. 1918	special	13,200	2	{2,300 2,300 4,000	6
N1639	Etobicoke Twp. dist. sta....	Feb. 1923	at York T.S.	13,200	1	4,000	2
N1634	Woodbridge dist. sta.....	Dec. 1914	E. brick	13,200	1	4,000	1
N 17	Hamilton trans. sta.....	Oct. 1922	outdoor	110,000	2	13,200	4
N17D31	Saltfleet dist. sta.....	Feb. 1922	P. outdoor	13,200	1	4,000	1
N 20	Queenston gen. sta.....	Jan. 1922	concrete special	110,000	6	12,000	1
N98-1	Niagara System res. equip.						
N98-2	" " " "						
N98-3	" " " "						
N98-6	" " " "						
N98-8	" " " "						
N98-13	" " " "						
N98-14	" " " "						
N98-15	" " " "						
N98-19	" " " "						
N98-20	" " " "						
N98-22	" " " "						
N98-23	" " " "						
N98-24	" " " "						
N98-26	" " " "						
N98-27	" " " "						

Note.—For subnotes a, b, c, etc., see end of table.

DETAILS AS OF OCTOBER 31, 1923—Continued

Transformers									
Active							Spare		
No. of banks	No. of units	Make of units	Unit kv-a.	Phase rating of unit	Total kv-a.	Banks connected		Single phase except; where otherwise stated	
						H.V.	L.V.	No.	Make

SYSTEM—25 CYCLES—Continued

1	1	M.E. Co.	25	1	25					
1	1	P.E. Co.	150	3	150	△	△			
1	1	M.E. Co.	75	3	75	△	△			
1	3	C.W. Co.	75	1	225	△	Y			
1	3	P.E. Co.	150	1	450	△	Y	3	C.C.W. Co.	75
.....	1	M.E. Co.	75	3	75	26400m	4000Y			
						13200△	2300△			
1	3	C.G.E. Co.	5,000	1	15,000	Y	△	1	C.G.E. Co.	5,000
2	2	C.C.W. Co.	1,500	3	3,000	Y	△			
1	1	C.W. Co.	1,500	3	1,500	Y	△			
1	1	C.C.W. Co.	1,500	3	1,500	△	Y			
1	1	P.E. Co.	300	3	300	△	Y			
1	1	C.C.W. Co.	300	3	300	△	Y			
1	3	C.G.E. Co.	75	1	225	△	Y			
2	6	C.W. Co.	5,000	1	30,000	Y	△			
1	1	M.E. Co.	400	3	400	Y	Y			
5	15	C.W. Co.	15,000	1	225,000	Y	△			
.....	4	C.W. Co.	750	1	3,000	63500m	13200m			
.....	1	G.E. Co.	750	1	750	63500m	13200m			
.....	4	G.E. Co.	750	1	3,000	63500m	13200m			
.....	1	M.E. Co.	75	3	75	26400m	4000Y			
						13200△	2300/575△			
.....	1	M.E. Co.	750	3	750	26400Y	4000m			
						13200	2300/575△			
.....	2	C.C.W. Co.	1,500	3	3,000	26400Y	4000Ym			
						13200	2300△			
.....	1	M.E. Co.	50	3	50	26400m	4000Ym			
						13200△	2300/575△			
.....	2	C.W. Co.	1,250	1	2,500	63500m	26400m			
							13200			
.....	1	C.W. Co.	2,500	1	2,500	63500m	26400m			
							13200			
.....	1	M.E. Co.	50	3	50	26400m	4000m			
						13200	2300/575△			
.....	10	C.G.E.	5,000	1	50,000	63500	26400m			
							13200			
.....	4	C.C.W. Co.	300	3	1,200	13200	4000Y			
							2300/575△			
.....	4	G.E. Co.	750	1	3,000	63500	13200m			
.....	3	G.E. Co.	1,250	1	3,750	63500m	13200m			
.....	3	P.E. Co.	150	1	450	13200	2200			
							1100/550			



TABLE OF TRANSFORMING STATION

Station				Circuits			
System number	Name	Date placed in operation	Type of building	High voltage		Low voltage	
				Volts	No.	Volts	No.
NIAGARA							
N98-28	Niagara System res. equip.						
N98-29	" " " "						
N98-31	" " " "						

## ONTARIO POWER COMPANY

A 2	O.P. Co. dist. sta.	1905	brick special	60,000	2	12,000	11
A 3	Port Colborne dist. sta.	Sept. 28, 1913	special	30,000 30,000	2 2	2,300 12,000	2 4
NC 701	Montrose dist. sta.	Feb. 1920	corrugated iron special	12,000	2	4,000	2

## SEVERN

S 1	Midland dist. sta.	Aug. 27, 1917	brick special	22,000	3	2,300	5e
S 2	Penetang dist. sta.	Nov. 1911	brick special	22,000	1	2,300	4e
S 4	Barrie dist. sta.	Mar. 1913	brick special	22,000	1	2,300	5e
S 5	Collingwood dist. sta.	1913	brick special	22,000	4	2,300	2e
S 6	Coldwater dist. sta.	1913	G. brick	22,000	1	2,300	1
S 7	Elmvale dist. sta.	May 27, 1913	G. brick	22,000	1	2,300	1
S 10	Stayner dist. sta.	Sept. 1913	G. brick	22,000	1	4,000	2
S 11	Midland (G.T.R. Tiffin) dist. sta.	Sept. 15, 1922	brick special	22,000	2	575	1
S 17	Pt. McNicoll dist. sta.	Feb. 1921	P. outdoor	2,200	1	575	1
S 18	Waubashene dist. sta.	Nov. 13, 1914	E. brick	22,000	1	2,300	1
S 19	Victoria Harbor dist. sta.	July 1, 1914	brick special	22,000	1	2,300	1
S 20	Big Chute gen. sta.	July 17, 1914	concrete special	22,000	3	2,200	0
S 21	C.P.R., Pt. McNicoll.	July, 15, 1916	brick special	22,000	2	575	1
S 22	Camp Borden dist. sta.	June 29, 1916	brick special	22,000	1	2,200	3e
S 32	Alliston dist. sta.	May 23, 1918	H. brick	22,000	1	4,000	1
S 33	Beeton dist. sta.	July 26, 1918	P. outdoor	22,000	1	4,000	1
S 34	Tottenham dist. sta.	Sept. 19, 1918	P. outdoor	22,000	1	4,000	1
S 35	Cookstown dist. sta.	Apr. 25, 1918	P. outdoor	22,000	1	4,000	1
S 36	Thornton dist. sta.	Oct. 16, 1918	P. outdoor	22,000	1	4,000	1
S 37	Bradford dist. sta.	Sept. 6, 1918	H. brick modified	22,000 4,000	1 1	575 575	1 1
S98-4	Severn Sys. res. equip.	Feb. 15, 1922					
S98-5	" " " "	Mar. 4, 1923					
S98-6	" " " "	July 18, 1923					

## EUGENIA

E 1	Eugenia gen. sta.	Nov. 18, 1915	brick special	22,000	6	4,000	2
E 2	Owen Sound dist. sta.	Nov. 18, 1915	brick special	22,000	2	2,300	4
E 3	Chatsworth dist. sta.	Nov. 18, 1915	H. brick	22,000	1	4,000	1
E 4	Chesley dist. sta.	June 18, 1916	G. brick	22,000	1	4,000	1
E 5	Dundalk dist. sta.	Nov. 18, 1915	H. brick	22,000	1	4,000	1

Note.—For subnotes *a*, *b*, *c*, etc., see end of table.

## DETAILS AS OF OCTOBER 31, 1923—Continued

Transformers										
Active							Spare			
No. of banks	No. of units	Make of units	Unit kv-a.	Phase rating of unit	Total kv-a.	Banks connected		Single phase except where otherwise stated		
						H.V.	L.V.	No.	Make	Unit kv-a.

## SYSTEM—25 CYCLES—Continued

.....	{ 2	G.E. Co.	750	1	1,500	63500m	13200m	.....	.....	.....
.....	{ 1	C.G.E. Co.	1,250	1	1,250	63500m	13200m	.....	.....	.....
.....	3	C.G.E. Co.	75	1	225	13200m	2300/575m	.....	.....	.....
.....	3	C.G.E. Co.	20	1	60	13200m	2300/575m	.....	.....	.....

## SYSTEM—25 CYCLES

4	12	W.E. & M. Co.	3,000	1	36,000	Y	Δ	.....	.....	.....
2	6	C.W. Co.	3,000	1	18,000	Y	Δ	.....	.....	.....
1	3	C.G.E. Co.	150	1	450	Δ	Δ	3	P.T. Co.	25
1	3	C.W. Co.	1,500	1	4,500	Δ	Δ	2	P.T. Co.	50
								1	C.W. Co.	60
{ 1	1	C.C.W. Co.	1,500	3	1,500	Δ	Y	1	C.G.E. Co.	550
{ 1	1	C.G.E. Co.	1,500	3	1,500	Δ	Y	.....	.....	.....

## SYSTEM—60 CYCLES

1	3	M.E. Co.	300	1	900	Δ	Δ	.....	.....	.....
1	3	M.E. Co.	300	1	900	Δ	Δ	.....	.....	.....
{ 1	2	P.E. Co.	350	1	700	T	+	.....	.....	.....
{ 1	2	C.G.E. Co.	350	1	700	T	+	.....	.....	.....
1	3	C.G.E. Co.	400	1	1,200	Δ	Δ	.....	.....	.....
1	3	C.W. Co.	40	1	120	Δ	Δ	.....	.....	.....
1	3	C.W. Co.	75	1	225	Δ	Δ	.....	.....	.....
1	3	C.W. Co.	100	1	300	Δ	Y	.....	.....	.....
1	3	C.G.E. Co.	400	1	1,200	Δ	Δ	.....	.....	.....
1	3	P.E. Co.	15	1	45	Δ	Δ	.....	.....	.....
1	2	C.G.E. Co.	25	1	50	V	V	.....	.....	.....
1	1	C.W. Co.	100	1	100	.....	.....	.....	.....	.....
2	6	C.W. Co.	600	1	3,600	Δ	Δ	1	C.W. Co.	600
1	3	C.G.E. Co.	500	1	1,500	Δ	Δ	.....	.....	.....
1	3	C.W. Co.	125	1	375	Δ	Δ	.....	.....	.....
1	3	P.E. Co.	75	1	225	Δ	Y	.....	.....	.....
1	1	M.E. Co.	75	3	75	Δ	Y	.....	.....	.....
1	1	M.E. Co.	75	3	75	Δ	Y	.....	.....	.....
1	1	C.G.E. Co.	75	3	75	Δ	Y	.....	.....	.....
1	1	M.E. Co.	25	3	25	Δ	Y	.....	.....	.....
1	1	C.G.E. Co.	75	3	75	Δ	Δ	.....	.....	.....
1	3	C.G.E. Co.	15	1	45	Δ	Y	.....	.....	.....
.....	1	C.G.E. Co.	50	3	50	22000 <sup>m</sup> Δ	2300/575 <sup>m</sup> Δ	.....	.....	.....
.....	3	C.C.W. Co.	200	1	600	22000m	2200m	.....	.....	.....
.....	{ 1	C.G.E. Co.	25	1	25	22000m	2300/575m	.....	.....	.....
.....	{ 2	M.E. Co.	25	1	50	22000m	2300/575m	.....	.....	.....

## SYSTEM—60 CYCLES

2	6	C.W. Co.	900	1	5,400	Δ	Δ	.....	.....	.....
1	3	C.W. Co.	550	1	1,650	Δ	Δ	.....	.....	.....
1	3	C.G.E. Co.	25	1	75	Δ	Y	.....	.....	.....
1	3	C.G.E. Co.	100	1	300	Δ	Y	.....	.....	.....
1	3	C.G.E. Co.	50	1	150	Δ	Y	.....	.....	.....

## TABLE OF TRANSFORMING STATION

Station				Circuits			
System number	Name	Date placed in operation	Type of building	High voltage		Low voltage	
				Volts	No.	Volts	No.
EUGENIA							
E 7	Durham dist. sta.....	Nov. 18, 1915	H. brick	22,000	1	4,000	2
E 8	Hanover dist. sta.....	1918	G. brick mod- ified	22,000	1	{ 4,000 2,300	3 1
E 9	Mt. Forest dist. sta.....	Nov. 18, 1915	G. brick	22,000	1	4,000	1
E10	Shelburne dist. sta.....	Sept. 5, 1917	H. brick	22,000	1	4,000	2
E12	Orangeville dist. sta.....	Feb. 1917	G. brick	22,000	1	4,000	2
E13	Grand Valley dist. sta.....	Aug. 1917	H. brick mod.	22,000	1	4,000	2
E15	Kilsyth dist. sta.....	Jan. 1, 1918	P. outdoor	22,000	1	4,000	1
E17	Elmwood dist. sta.....	May 23, 1918	P. outdoor	22,000	1	4,000	1
E18	Priceville dist. sta.....	Mar. 17, 1921	P. outdoor	22,000	2	2,200	1
E21	Teeswater dist. sta.....	May 1921	H. brick	22,000	1	4,000	2
E22	Wingham dist. sta.....	April 1921	G. brick	22,000	1	2,300	4
E24	Holyrood dist. sta.....	April 1921	outdoor special	22,000	1	4,000	2
E25	Kincardine dist. sta.....	May 1921	special brick	22,000	1	2,200	2
E26	Walkerton Quarry dist. sta..	Feb. 1921	frame	22,000	1	2,300	2
E29	Durham, Russell dist. sta...	May 7, 1922	P. outdoor	22,000	2	575	1
E31	Mt. Forest freq. chg. sta....	Oct. 1923	sheel metal	{ 26,400 22,000	1 1	2,300 2,300	1 1
WASDELLS							
W 1	Wasdells Falls gen. sta.....	Sept. 1914	concrete special	22,000	2	2,300	2
W 2	Beaverton dist. sta.....	Sept. 1914	G. special brick	22,000	1	4,000	1
W 3	Cannington dist. sta.....	Sept. 1914	G. brick	22,000	1	4,000	1
W 6	Kirkfield dist. sta.....	April 22, 1920	H. concrete	{ 22,000 4,000	1 1	575 575	1 1
W 7	Greenbank dist. sta.....	Sept. 1922	P. outdoor	22,000	1	4,000	1
W 9	Pinedale dist. sta.....	Sept. 1923	outdoor	22,000	1	2,300	1
MUSKOKA							
M 1	South Falls gen. sta.....	Sept., 1916	brick special	22,000	1	6,600	1
M 2	Huntsville dist. sta.....	.....	G. brick special	22,000	1	2,300	1
ST. LAWRENCE							
L 1	Cornwall trans. sta.....	May 1, 1919	brick	110,000	2	44,000	2
L 2	Prescott dist. sta.....	Mar. 1914	G. outdoor	44,000	1	2,400	3
L 3	Brockville dist. sta.....	April 1915	brick	44,000	1	2,400	3
L 4	Winchester dist. sta.....	July 18, 1914	G. brick	26,400	1	4,000	1
L 5	Chesterville dist. sta.....	Aug. 3, 1919	S. outdoor mod.	26,400	1	4,160	1
L 6	Cornwall Howard Smith Paper Co., dist. sta.....	June 15, 1919	brick	44,000	1	600	7
L 7	Williamsburg dist. sta.....	Dec. 24, 1920	outdoor	26,400	1	2,400	1
L13	Martintown dist. sta.....	May 25, 1921	R. outdoor	44,000	1	4,160	1
L14	Apple Hill dist. sta.....	Feb. 22, 1921	S. outdoor mod.	44,000	1	4,160	1
L15	Alexandria dist. sta.....	Jan. 18, 1921	S. outdoor mod.	44,000	1	4,160	1
L21	Morrisburg dist. sta.....	Oct. 1, 1922	outdoor	44,000	1	26,400	1
L98-1	St. Lawrence Sys. res. equip.	.....	.....	.....	.....	.....	.....
L98-2	St. Lawrence Sys. res. equip.	.....	.....	.....	.....	.....	.....
L98-3	St. Lawrence Sys. res. equip.	.....	.....	.....	.....	.....	.....

Note.—For subnotes a, b, c, etc., see end of table.



## DETAILS AS OF OCTOBER 31, 1923—Continued

Transformers										
Active								Spare		
No. of banks	No. of units	Make of units	Unit kv-a.	Phase rating of unit	Total kv-a.	Banks connected		Single phase except where otherwise stated		
						H.V.	L.V.	No.	Make	Unit kv-a.
SYSTEM—60 CYCLES—Continued										
1	3	C.G.E. Co.	50	1	150	△	Y	.....	.....	.....
2	2	P.E. Co.	750	3	1,500	△	Y	.....	.....	.....
1	1	P.E. Co.	750	3	750	△	△	.....	.....	.....
1	3	C.G.E. Co.	100	1	300	△	Y	.....	.....	.....
1	3	M.E. Co.	50	1	150	△	Y	.....	.....	.....
1	3	G.E. Co.	100	1	300	△	Y	.....	.....	.....
1	3	C.G.E. Co.	75	1	225	△	Y	.....	.....	.....
1	1	M.E. Co.	75	3	75	△	Y	.....	.....	.....
1	1	M.E. Co.	50	3	50	△	Y	.....	.....	.....
1	2	G.E. Co.	10	1	20	V	V	.....	.....	.....
1	3	C.G.E. Co.	50	1	150	△	Y	.....	.....	.....
1	3	C.G.E. Co.	250	1	750	△	△	.....	.....	.....
1	3	C.W. Co.	100	1	300	△	Y	.....	.....	.....
1	3	C.W. Co.	125	1	375	△	△	.....	.....	.....
1	3	M.E. Co.	150	1	450	△	△	.....	.....	.....
1	3	M.E. Co.	100	1	300	△	△	.....	.....	.....
1	3	P.E. Co.	350	1	1,050	△	△	.....	.....	.....
1	3	M.E. Co.	300	1	900	△	△	.....	.....	.....
SYSTEM—60 CYCLES										
2	6	C.W. Co.	150	1	900	△	△	1	C.W. Co.	150
1	3	C.W. Co.	100	1	300	△	Y	.....	.....	.....
1	3	C.W. Co.	100	1	300	△	Y	.....	.....	.....
1	3	P.E. Co.	75	1	225	△	△	.....	.....	.....
1	3	M.E. Co.	10	1	30	Y	△	.....	.....	.....
1	1	C.G.E. Co.	150	3	150	△	Y	.....	.....	.....
1	1	M.E. Co.	75	3	75	△	Y	.....	.....	.....
SYSTEM—60 CYCLES										
1	3	C.G.E. Co.	400	1	1,200	△	△	.....	.....	.....
1	3	C.G.E. Co.	300	1	900	△	△	.....	.....	.....
SYSTEM—60 CYCLES										
1	3	C.G.E. Co.	5,000	1	15,000	Y	Y	1	C.G.E. Co.	5,000
1	1	P.E. Co.	300	3	300	Y	△	4	C.G.E. Co.	1,250
2	2	C.G.E. Co.	750	3	1,500	Y	△	.....	.....	.....
1	3	C.G.E. Co.	50	1	150	△	Y	.....	.....	.....
1	1	C.G.E. Co.	300	3	300	△	Y	.....	.....	.....
{	1	C.G.E. Co.	1,500	3	1,500	Y	△	.....	.....	.....
	1	C.G.E. Co.	750	3	750	Y	△	.....	.....	.....
	1	M.E. Co.	30	1	30	.....	.....	.....	.....	.....
	1	P.E. Co.	150	3	150	Y	Y	.....	.....	.....
	1	P.E. Co.	300	3	300	Y	Y	.....	.....	.....
1	1	P.E. Co.	300	3	300	Y	Y	.....	.....	.....
1	1	P.E. Co.	300	3	300	Y	△	.....	.....	.....
.....	1	C.G.E. Co.	750	3	750	<sup>m</sup> 44000Y 25400△	4160Y <sup>m</sup> 2400/600△	.....	.....	.....
.....	1	M.E. Co.	300	3	300	<sup>m</sup> 44000Y 25400△	4160Y <sup>m</sup> 2400/600△	.....	.....	.....
.....	3	C.G.E. Co.	150	1	450	26400 <sup>m</sup> 13200	2300 <sup>m</sup> 575	.....	.....	.....

TABLE OF TRANSFORMING STATION

Station				Circuits			
System number	Name	Date placed in operation	Type of building	High voltage		Low voltage	
				Volts	No.	Volts	No.
RIDEAU							
H 1	High Falls gen. sta. ....	May 1, 1920	concrete	25,400	1	4,160	...
H 2	Perth dist. sta. ....	Feb. 27, 1920	G. brick mod.	26,400	1	2,300	2
H 3	Smiths Falls dist. sta. ....	Sept. 15, 1918	stone	25,400	1	2,400	3
H 5	Carleton Place dist. sta. ....	May 31, 1920	brick	26,400	1	2,200	4
H 8	Balderson dist. sta. ....	Sept. 29, 1921	R. outdoor	26,400	1	2,400	1
H 9	Kemptville dist. sta. ....	Nov. 28, 1921	R. outdoor	25,400	1	4,160	1
THUNDER BAY							
P 1	Nipigon gen. sta. ....	Dec. 20, 1920	concrete special	110,000	1	12,000	2
P 2	Pt. Arthur trans. sta. ....	Dec. 20, 1920	wood frame and gunite special	110,000	1	22,000	3
P231	Pt. Arthur dist. sta. ....	.....	brick special	22,000	4	2,200	8
CENTRAL ONTARIO AND TRENT							
C 3	Sidney term. trans. sta. ....	1911 <i>k</i>	brick special	44,000	3	6,600	6
C 6	Brighton dist. sta. ....	1911 <i>k</i>	brick special	44,000	1	4,160	1
C 7	Colborne dist. sta. ....	1912 <i>k</i>	brick special	44,000	1	2,400	1
C10	Ranney Falls gen. sta. ....	1922	concrete special and stone	44,000	1	6,600	...
C11	Seymour gen. sta. ....	1909 <i>k</i>	special stone	44,000	2	2,400	3
C13	Cobourg dist. sta. ....	1911 <i>k</i>	brick special	44,000	1	2,400	4
C14	Heely Falls gen. sta. ....	1914 <i>k</i>	brick special	44,000	3	6,600	1
C16	Port Hope dist. sta. ....	1912 <i>k</i>	brick special	44,000	1	2,400	3
C18	Auburn gen. sta. ....	1912 <i>k</i>	brick special	6,600	4	2,400	2
C19	Auburn trans. sta. ....	1912 <i>k</i>	brick special	44,000	1	6,600	2
C20	Peterboro dist. sta. ....	1912 <i>k</i>	spec. met. fram	6,600	4	2,400	9
C22	Newcastle dist. sta. ....	1911 <i>k</i>	brick special	44,000	1	2,400	1
C23	Bowmanville dist. sta. ....	1912 <i>k</i>	brick special	44,000	1	4,160	3
C24	Oshawa dist. sta. ....	1911 <i>k</i>	brick special	44,000	1	4,160	7
C25	Millbrook dist. sta. ....	1912 <i>k</i>	.....	44,000	1	2,400	1
C26	Omeme dist. sta. ....	Jan. 17, 1918	outdoor special	44,000	1	4,160	1
C29	Lindsay dist. sta. ....	1912 <i>k</i>	brick special	11,000	2	4,160	2
C30	Fenelon Falls gen. sta. ....	<i>k</i>	brick special	11,000	2	600	1
C31	Norwood dist. sta. ....	Jan. 12, 1921	S. outdoor mod. special	44,000	1	4,160	2
C32	Deloro dist. sta. ....	1909 <i>k</i>	brick special	44,000	1	600	1
C33	Madoc dist. sta. ....	1909 <i>k</i>	brick special	44,000	1	4,160	4
C34	Sulphide dist. sta. ....	1910 <i>k</i>	brick special	44,000	1	2,400	3
C36	Pulp Mill dist. sta. ....	1909 <i>k</i>	concrete special	44,000	1	2,400	3
C37	Trenton dist. sta. ....	.....	brick special	6,600	2	4,160	2
C38	Belleville dist. sta. ....	1910 <i>k</i>	brick special	44,000	1	2,400	6
C39	Belleville Cement Co., dist. sta. ....	1911 <i>k</i>	brick special	44,000	1	600	<i>j</i>
C40	Pt. Anne Quarries dist. sta. ....	1910 <i>k</i>	brick special	44,000	1	600	4
C41	Lehigh Cement dist. sta. ....	1911 <i>k</i>	brick special	44,000	2	600	<i>j</i>
C42	Deseronto dist. sta. ....	1911 <i>k</i>	brick special	44,000	1	2,400	3
C43	Napanee dist. sta. ....	1912 <i>k</i>	brick special	44,000	1	4,160	2

Note.—For subnotes *a*, *b*, *c*, etc., see end of table.

## DETAILS AS OF OCTOBER 31, 1923—Continued

Transformers										
Active								Spare		
No. of banks	No. of units	Make of units	Unit kv-a.	Phase rating of unit	Total kv-a.	Banks connected		Single phase except where otherwise stated		
						H.V.	L.V.	No.	Make	Unit kv-a.
SYSTEM—60 CYCLES										
3	3	P.E. Co.	750	3	2,250	△	Y	...	...	...
1	3	C.W. Co.	200	1	600	△	△	...	...	...
1	1	C.G.E. Co.	750	3	750	△	△	...	...	...
1	3	P.T. Co.	250	1	750	△	△	...	...	...
1	1	M.E. Co.	30	1	30	..	..	...	...	...
1	1	P.E. Co.	150	3	150	△	Y	...	...	...
SYSTEM—60 CYCLES										
1	3	C.G.E. Co.	8,000	1	24,000	Y	△	1	C.G.E. Co.	8,000
1	3	C.G.E. Co.	4,000	1	12,000	Y	△	1	C.G.E. Co.	4,000
2	6	S.Co. of C.	750	1	4,500	Y	△	1	S.Co. of C.	750
SYSTEM—60 CYCLES										
3	3	C.W. Co.	3,000	3	9,000	Y	△	...	...	...
1	3	C.G.E. Co.	100	1	300	△	△	...	...	...
1	1	C.G.E. Co.	100	1	100	..	..	...	...	...
2	2	C.G.E. Co.	4,500	3	9,000	Y	△	...	...	...
4	4	C.W. Co.	1,125	3	4,500	Y	Y	...	...	...
{1	1	C.G.E. Co.	300	3	300	Y	△	1	C.G.E. Co.	300
{1	1	C.G.E. Co.	750	3	750	Y	△	...	...	...
3	3	C.W. Co.	3,750	3	11,250	Y	△	...	...	...
{1	1	C.G.E. Co.	750	3	750	Y	△	...	...	...
{1	1	C.G.E. Co.	300	3	300	Y	△	...	...	...
1	3	C.G.E. Co.	200	1	600	△	△	...	...	...
2	2	C.G.E. Co.	1,875	3	3,750	Y	△	...	...	...
4	4	C.G.E. Co.	750	3	3,000	Y	△	...	...	...
1	1	C.G.E. Co.	100	1	100	...	...	...	...	...
2	2	C.G.E. Co.	750	3	1,500	Y	Y	...	...	...
{2	2	C.G.E. Co.	1,500	3	3,000	Y	Y	1	C.G.E. Co.	750
{2	2	C.G.E. Co.	750	3	1,500	Y	Y	...	...	...
1	1	C.G.E. Co.	100	1	100	...	...	...	...	...
1	3	M.E. Co.	40	1	120	Y	Y	...	...	...
{2	2	C.G.E. Co.	750	3	1,500	Y	Y	...	...	...
{1	1	C.G.E. Co.	750	3	750	Y	Y	...	...	...
2	6	C.G.E. Co.	135	1	810	△	△	1	C.G.E. Co.	135
								1	C.G.E. Co.	750
1	1	P.E. Co.	300	3	300	Y	Y	...	...	...
1	3	C.W. Co.	250	1	750	△	△	...	...	...
3	3	C.G.E. Co.	300	3	900	Y	Y	...	...	...
2	2	C.C.W. Co.	240	3	480	Y	△	...	...	...
2	2	C.W. Co.	1,125	3	2,250	Y	Y	...	...	...
{2	6	C.G.E. Co.	100	1	600	△	Y	...	...	...
{1	1	C.G.E. Co.	750	3	750	△	Y	...	...	...
3	3	C.G.E. Co.	750	3	2,250	Y	△	...	...	...
{1	1	C.G.E. Co.	750	3	750	Y	△	...	...	...
{1	1	C.G.E. Co.	100	1	100	...	...	...	...	...
2	2	C.G.E. Co.	300	3	600	Y	△	...	...	...
5	5	C.G.E. Co.	750	3	3,750	Y	△	...	...	...
2	2	C.G.E. Co.	300	3	600	Y	△	...	...	...
2	2	C.G.E. Co.	300	3	600	Y	Y	...	...	...



TABLE OF TRANSFORMING STATION

System number	Station			Circuits			
	Name	Date placed in operation	Type of building	High voltage		Low voltage	
				Volts	No.	Volts	No.

## CENTRAL ONTARIO AND TRENT

C44	Kingston dist. sta.....	1917	brick special	44,000	1	2,400	5
C45	Wellington dist. sta.....	Mar. 25, 1919	S. outdoor	44,000	1	4,160	2
C46	Picton dist. sta.....	Mar. 6, 1919	S. outdoor	44,000	1	2,400	2
C47	Marmora dist. sta.....	Dec. 14, 1920	outdoor special	44,000	1	2,400	1
C49	Warkworth dist. sta.....	Sept. 1923	outdoor	44,000	1	2,400	1

## NIPISSING

Z 1	Nipissing gen. sta.....	1909k	brick special	22,000	1	2,200	1
Z 2	Powassan dist. sta.....	1909k	brick special	22,000	1	2,400	1
Z 3	Callander dist. sta.....	1909k	sheet metal special	22,000	1	2,200	1
Z 4	North Bay dist. sta.....	1909k	brick special	22,000	1	2,200	1
Z 98	Reserve equipment.....	Sept. 7, 1921	.....	.....	.....	.....	.....

- a.* Includes one constant-current street-lighting feeder, the property of the municipality.  
*b.* Includes two constant-current street-lighting feeders, the property of the municipality.  
*c.* Feeders are the property of the municipality.  
*j.* Feeders, other than those shown are owned by customers.

DETAILS AS OF OCTOBER 31, 1923—Continued

Transformers										
Active							Spare			
No. of banks	No. of units	Make of units	Unit kv-a.	Phase rating of unit	Total kv-a.	Banks connected		Single phase except where otherwise stated		
						H.V.	L.V.	No.	Make	Unit kv-a.

SYSTEM—60 CYCLES—Continued

3	3	C.G.E. Co.	750	3	2,250	Y	△	.....	.....	.....
1	1	C.G.E. Co.	300	3	300	Y	Y	.....	.....	.....
1	1	C.G.E. Co.	300	3	300	Y	△	.....	.....	.....
1	1	M.E. Co.	50	1	50	.....	.....	.....	.....	.....
1	1	M.E. Co.	50	1	50	.....	.....	.....	.....	.....

SYSTEM—60 CYCLES

1	3	P.E. Co.	900	1	2,700	△	△	.....	.....	.....
1	3	C.G.E. Co.	50	1	150	△	△	.....	.....	.....
1	{1	A.C.B.	50	1	75	V	V	.....	.....	.....
		C.G.E.	25	1	.....	.....	.....	.....	.....	.....
1	3	C.W. Co.	450	1	1,350	△	△	.....	.....	.....
.....	3	C.W. Co.	300	1	900	22,000 <sub>m</sub>	2,200 <sub>m</sub>	.....	.....	.....

*k.* Operation taken over by the Hydro-Electric Power Commission in March, 1916.  
*l.* Transformer good for 50 kv-a. at 44,000 volts.  
*m.* Voltage rating.  
*n.* Includes one feeder owned by the municipality.

## SECTION VI

### TRANSMISSION SYSTEMS

#### NIAGARA SYSTEM

The principal work carried out during the present year was the further development of the 110,000-volt line of the Niagara system to deliver power from the Queenston generating station to points throughout the system where the demand was increasing most rapidly.

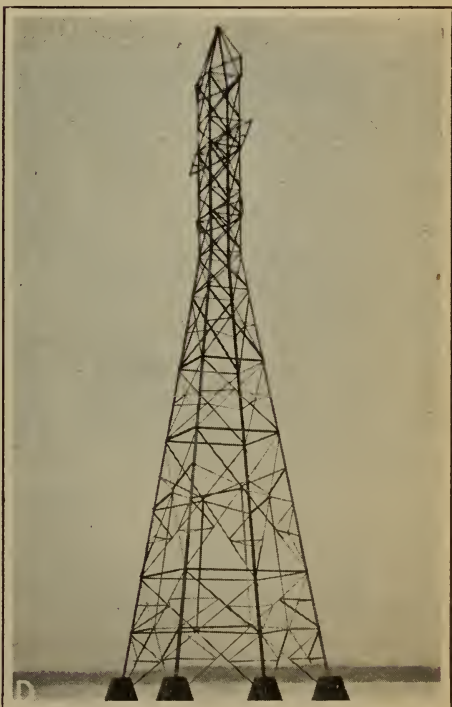
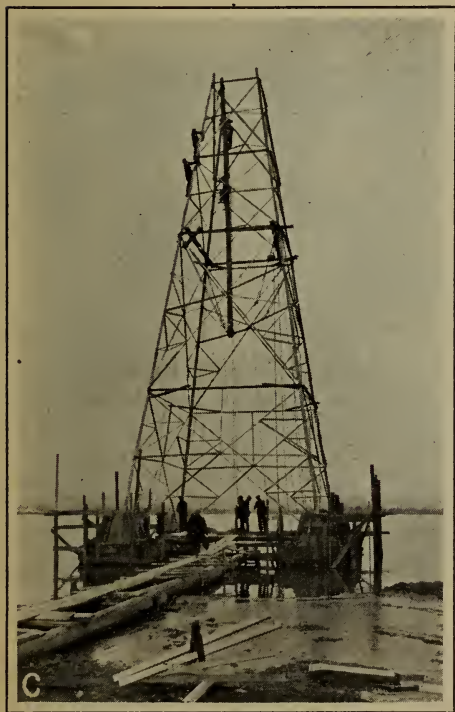
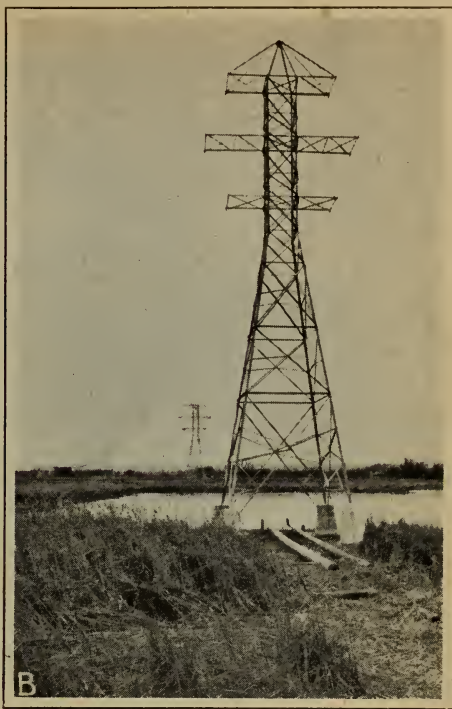
Negotiations with the Department of Public Works of Canada and other interested bodies were completed for the construction of a steel-tower line across Burlington bay. This line is necessary to complete the connection between Queenston and the existing 110,000-volt lines paralleling the north shore of Lake Ontario. Construction is well under way on this work. The portion of the new line north of Burlington bay has been completed and the conductors are erected through to York station. Pending the completion of this line across Burlington bay, temporary construction has been provided across Burlington Beach and this line between Queenston and Toronto is available for operation.

A portion of the 110,000-volt line between Queenston and St. Thomas district has been completed and is in operation from Queenston to a junction point near Allanburg, where it is connected to the existing lines between Niagara and Dundas.

A new 110,000-volt tie line is being built from York high-tension station to the Toronto and Niagara Power Company's lines near Islington. These lines are being reinsulated for 110,000-volt operation from this point to the Davenport station. Some experimental work is being done on these lines with pin type insulators.

About twenty-nine miles of low-tension lines were built in the St. Catharines and Richmond Hill districts. Plans were completed for a new direct line from Essex high-tension station to Walkerville to take care of the increased load in this municipality. The line between Stratford and Goderich was reinsulated and the telephone line from Stratford to Harriston was restrung.





## TRANSMISSION TOWERS—110,000 VOLTS

- a. Standard Tower near St. Catharines
- b. Burlington Beach line: looking south from Radial crossing
- c. Burlington Beach line: erecting steel tower with suspended gin pole
- d. Burlington Beach line: completed tower

### SEVERN SYSTEM

The line from Big Chute to Waubauskene was reinsulated and long spans at crossings were rebuilt to provide for more reliable operating conditions on the main line.

### EUGENIA SYSTEM

A 26,400-volt tie line was built from Harriston to Mount Forest connecting the Niagara and Eugenia systems in order to supplement the power supply on the latter system. This line will operate at 25 cycles.

A 22,000-volt line is being built from the Eugenia-Collingwood line to Meaford. Air-break switches on this system are being replaced by switches of more modern design. The telephone line between this system and the Toronto office was restrung, giving a better connection.

### MUSKOKA SYSTEM

Preliminary engineering work is being done in connection with a new 40,000-volt line from South Falls to Wausbaushene.

### THUNDER BAY SYSTEM

A line is being located for a 110,000-volt steel-tower line from Cameron Falls to Port Arthur and Fort William. Construction is also proceeding on a 110,000-volt line from the 110,000-volt station at Nipigon to intersect the present line in the Nipigon Reserve.

### CENTRAL ONTARIO AND TRENT SYSTEM

A new 44,000-volt line is being built in Peterboro from the Auburn station to a new substation on Dalhousie street. There have also been built 44,000-volt lines from the power plants which are under construction at Dams 8 and 9 on the Trent river to the Heely Falls-Trenton line, near Meyersburg.

### NIPISSING SYSTEM

Construction work is proceeding on a 22,000-volt line from Bingham Chute to existing lines at Powassan.

### GENERAL

A radical change has been made in the construction of the 110,000-volt, steel-tower lines by using heavier towers and conductors and increasing the length of spans from 550 feet to 880 feet.

In Appendix II will be found tables relating to the different lines and systems built and operated by the Commission, or purchased from others.





TRANSMISSION TOWERS—CONSTRUCTION  
Burlington Beach line: driving wood piling for tower footings



TRANSMISSION TOWERS—CONSTRUCTION  
Burlington Beach line: steel dowels in wood piling



## DISTRIBUTION LINES AND SYSTEMS

At the end of Appendix II will be found a number of tabular statements giving details of certain works constructed by the Hydro-Electric Power Commission during the year ended October 31, 1923.

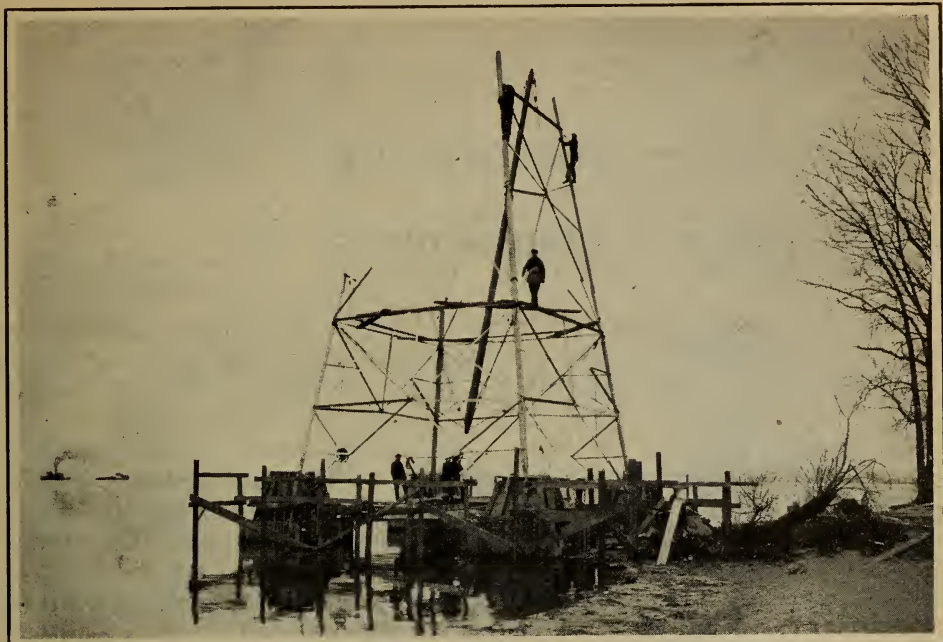
In general there is included in this tabulation information respecting the following:

(a) The construction in rural power districts of line and equipment to transmit power from the nearest substations to the individual consumers in these districts.

(b) The construction of feeder lines at voltages less than 5,000 to transmit power to municipalities and large individual consumers.

(c) The construction of metering stations in connection with the lines in (a) and (b) and

(d) The construction of distribution systems in municipalities, either partial or complete, including street lighting and underground cable and conduit systems.



#### TRANSMISSION TOWER—CONSTRUCTION

Burlington Beach line: erecting steel tower. Supply tug in distance



#### RURAL UNDERGROUND SERVICE

Laying rural underground lead-covered transmission line in shallow trench at side of highway

## SECTION VII

### LABORATORIES

In this department are centralized the functions of testing, research and inspection of materials, and the facilities and staff are at the service of the municipalities, in connection with all problems coming within the scope of these functions.

During the past year this department has experienced a gradual return to normal conditions; in practically every branch, work has increased in volume and present conditions indicate that the coming year will be an extremely active one. Inspection of construction materials, electrical equipment and incandescent lamps have been the chief causes of this increase.

The number of requests for tests received from Hydro municipalities indicates an increasing desire on the part of the co-operating municipalities to make use of the Laboratories.

The meter branch has done a considerable amount of commercial standardization and repair work on portable meters. Other branches have also from time to time been requested to undertake commercial tests.

Considerable work has been done by various members of the staff on technical committees and benefit has resulted therefrom to the Commission. The Laboratories is represented on committees of the Canadian Engineering Standards Association, the American Society for Testing Materials, the American Concrete Institute, the Illuminating Engineering Society and the American Institute of Electrical Engineers.

Several items of research, which are mentioned below, are receiving attention and several proposed investigations are under consideration.

#### High-Tension and General Testing Laboratory

##### Development of Equipment

The equipment in use in the High-Tension and General Testing Laboratory has been listed in former reports and this is maintained in such condition as to result in maximum benefit to the engineering activities of the system. Minor modifications are required at times to meet special testing demands, a typical example of which may be given as follows: Puncture test values up to 440,000 volts on insulator units were required and satisfactorily completed. When it is remembered that this voltage will strike across an air gap of 45 inches, or find its way through and shatter three to four inches of the best porcelain, the care necessary in designing such special equipment will be more apparent.

Attention has been given to the development of an insulator testing device for use on live lines, and present results indicate that a very simple device may be made which will be at least equal to, if not better than, any device at present available.



### **Routine Testing and Factory Inspection**

In addition to the regular testing in the laboratory of oils, rubber gloves for linemen's use, protective mats and other insulating material and electrical equipment for many purposes, considerable outside inspection and testing has been done by the staff for other departments and for outside parties as well. The main advantages of such an extension of the work of the laboratory, in addition to the service rendered, lie in the facilities afforded the staff in keeping up to date in the more important branches of equipment and applications of electricity. The laboratory becomes better fitted, as time goes on, to act as a clearing-house for information which may be legitimately passed on for the mutual benefit of its supporters.

### **Electrical Research**

Outstanding problems in electrical engineering, such as the mitigation of inductive interference between power and telephone lines, lightning protection, etc., have been followed up. Examination has been made as to the real merits of what purported to be improvements in devices and the methods of application of electric energy. Such services rendered tend to stabilize the judgment of engineers responsible for important decisions on methods or equipment. Assistance has been rendered in an extensive series of tests on the operating characteristics of the units in Queenston generating station. The magnitude of the masses of material and the forces in play under transient conditions demand most thorough analysis to ensure safety in operation.

### **Commercial Tests**

Some engineering assistance supplemented by actual test data has also been rendered to private manufacturers and inventors.

### **Special Studies of High Tension Problems**

A study of the efficiency and regulation of transmission lines transmitting large blocks of power for long distances and at different frequencies has also been made in anticipation of the future requirements of the Commission.

## **Approval Laboratory**

Although a smaller number of applications for approval of new or improved devices was received during the year, the amount of work involved has been practically the same as during the previous year. Thus, out of 160 applications, 123 reports were completed for which 165 cards summarizing these reports were issued. As in previous years, manufacturers using the approval service of the Underwriters' Laboratories made applications for listing their devices, and cards to the number of 111 were printed for insertion in the approval record of the Commission.

### **Heating Appliances**

Stationary and portable heating appliances have again figured largely in the applications for approval, several new lines of ranges, water heaters, portable air heaters and table appliances being submitted. Electric curling irons of various types have appeared in Ontario during the year and several have been submitted for approval, with the result that a number of substandard features have been eliminated.

### **Motor-Operated Appliances**

Devices of this nature have also been submitted in increasing numbers, especially machines for domestic, store and shop use, such as washers, floor

cleaners, sewing machines, fans, refrigerating machines, air compressors, dental motors, drills and oil-burning furnace equipments. The last mentioned devices are usually operated by automatic switches upon the operation of which the safe use of the furnace depends, and in consequence these switches are required to be designed and constructed in a rugged manner so that they will function without failure.

#### **Wiring Devices**

In the field of wiring work and services a new development may be noted in the design and construction of so-called "standardized" service boxes arranged to enclose the meter terminal board and connections with the object of preventing theft of current. A number of enclosed switch manufacturers have already arranged to manufacture this line and have applied for label service in connection therewith.

#### **Labels**

The number of labels sold shows a substantial increase, amounting to 40 per cent both in the case of transfer labels for enclosed switches and cut-out boxes, and of brass labels for signs; the panelboard label sales, however, show no increase. Factory inspection for both label and re-examination service has been more thoroughly done, the number of inspections made, averaging fifty per month for re-examination service and fifteen per month for label service.

#### **Card Reports**

To enable inspectors and card subscribers generally to keep the approval card record in proper order, a set of card guides, printed and supplied with celluloid tabs, was prepared and issued to each subscriber. This move was made necessary on account of the fact that the card record now comprises over 1,000 cards. In addition to the regular issue of approval cards to subscribers there is now published in each issue of the Hydro bulletin a list of devices approved and listed during the preceding month.

### **Meter and Standards Laboratory**

An active year has been enjoyed in all phases of the work of this laboratory. While a close co-operation has been maintained between this and other sections of the department upon problems of a general nature, there has been a notable increase in the volume of work handled by the Meter laboratory alone. Several of the more important investigations and tests referred to in previous reports have been continued into the current year, and either brought to completion or placed on a practical working basis pending further studies. There has continued an uninterrupted flow of work on instruments, meters and kindred apparatus, not only for the Laboratories and other departments of the Commission's organization, but for Hydro municipalities and outside parties. Very little new equipment has been found necessary, and only minor alterations have been required upon that already in use. A few of the outstanding features of the year's work are noted below:

#### **Standard and Portable Instruments**

A careful supervision has been maintained over the accuracy of the measuring instruments used in the Laboratories, and of the secondary and primary standards against which these are checked. Repairs have been effected upon such instruments as have been damaged in use, and the portable and other equipment kept up to a high standard of service. In such work as acceptance tests upon large power units special care has been taken in calibration, and the

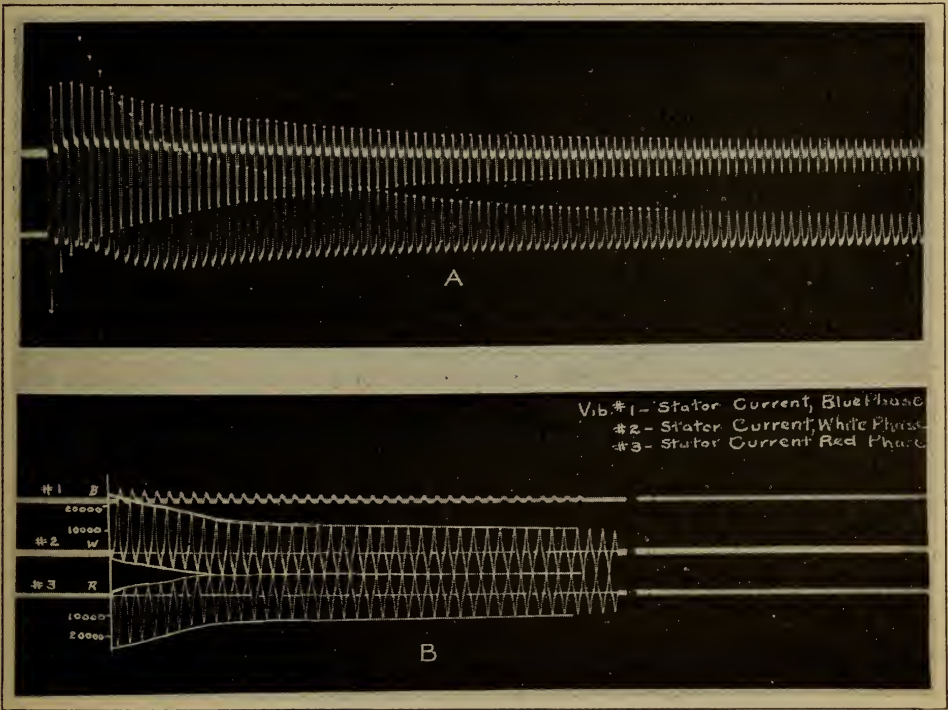
instruments used in these tests repeatedly checked and inter-checked before, during and after the actual trials. A recently acquired portable "Hand Tachograph", or curve-drawing speed-indicator has proved of great value in conducting tests on various generators and motors.

**Commercial Tests**

In addition to the routine checking and upkeep of the Laboratory measuring instruments, the facilities of this section have been fully utilized by manufacturers and utilities outside the Commission proper. Newly purchased instruments have been submitted by their owners for examination and calibration before being placed in service; and several lots of second-hand measuring equipment acquired by outside parties have been placed in the hands of the Laboratories for rebuilding and adjustment. Manufacturers and others have taken advantage of the facilities of the laboratory to have their instruments checked and adjusted for routine or special tests.

**Oscillographic Studies**

Several important oscillographic tests have been made, two of them being continuations of work described in the previous Annual Report. The short-circuit tests on the Queenston generating units have been carried on as required, these generally being performed with two oscillographs in circuit, so as to obtain records of the maximum number of transient phenomena. The information thus obtained has been of inestimable value in determining the characteristics of these machines. The oscillograph was also used in connection with a series of investigations carried out by the Hydraulic department upon the performance



TYPICAL OSCILLOGRAPH RECORDS

- A. Transient conditions of current and voltage upon first switching a large transformer into circuit
- B. Rush of current in a single-phase short circuit on a large alternator



of the turbines and their governors, and a large number of interesting films obtained, depicting governor action under varying load conditions.

Two oscillographic studies have been made by the Laboratories for the engineers of other interests. One of these consisted in an investigation of the performance of an automatic substation for street railway power supply, with particular attention to the performance of the quick-acting circuit-breakers. The other was of a very different nature, being a test made for a manufacturer of radio equipment, leading to improvements in the design of his transmitting apparatus.

There has been added to the Laboratory equipment a recently developed type of cathode ray oscillograph, which can be operated with a minimum of accessories, and which will function on very small amounts of energy. While there has not as yet been an opportunity to make use of this in field testing, it promises to prove of value in the study of sustained phenomena, such as wave distortions; while within the laboratory there are many tests upon which it will prove of great assistance.

#### **Inductive Co-ordination**

With the co-operation of the engineers of one of the communication companies, it has been possible to gather a mass of material relative to the inductive co-ordination of power and communication circuits. By using an amplifying device to bring the weak effects induced in the exposed lines to a magnitude suitable for oscillograph operation, records were made showing graphically the exact nature of the conditions existing in the circuits, thus furnishing very definite data upon which to base studies of inductive effects.

#### **Watt-hour Meters, etc.**

While the work carried out in the handling of watt-hour meters remains in its nature practically unchanged from that described in previous Reports, there has been a notable increase in the volume passing through the laboratory. This may be traced partly to the work connected with the distribution systems of the Toronto and Niagara Power interests, and the allied radial railway systems, as well as to the rapidly expanding rural power developments, which are at present practically all billed on a watt-hour basis. The midsummer lull, usually evident in meter work, was hardly noticeable this year, as meters for repair, Government inspection and second-hand stock have kept the test boards full at all times.

#### **Routine Tests**

Routine inspection has been performed upon a large number of street-lighting relays built by the Commission's shops for service in towns and small cities; and repairs have been made on time switches and similar mechanisms sent in from time to time by the municipalities.

#### **Investigations of New Meter Types**

There have been investigated two new types of demand attachments for watt-hour meters. These do not embody any radically new principles, but take the form of compact mechanisms designed to replace the registers on standard types of meters, giving an indication of maximum demand as well as of energy consumption. In these devices the time period is established by means of a small constant-speed induction motor, which is simpler than a timepiece equipped with the usual type of escapement. Several new types of watt-hour meters have made their appearance, the general tendency seeming to be toward increased overload capacity, correction of temperature errors and lower cost of production.

In addition to the above meter types there have been examined some new types of insulation testers, low resistance cable testers and station and portable instruments.

#### **Instrument Shop**

Much of the time of the Instrument shop has been taken up in the routine processes connected with the preparation of test pieces for the Structural Materials laboratory. Most of these specimens require the most accurate machining, and the chips or shavings must frequently be preserved for subsequent chemical tests. The usual amount of work has been done in connection with the upkeep of the laboratory apparatus, and development has been carried out on a number of pieces of experimental equipment required for special investigations.

#### **Photometric Laboratory**

The principal work of this section of the Laboratories is to make the necessary tests and inspections of lamps manufactured for the Commission to determine their acceptability under the Commission's specifications and to keep their quality up to as high a standard as possible. This work is mostly of a routine nature and is systematized so as to involve the least amount of labour.

#### **Inspection of "Hydro" lamps**

During the past year the number of lamps purchased by the Commission has been considerably in excess of that of any previous year. Consequently, the life test facilities of the laboratory have been taxed to their utmost to accommodate the volume of work handled. During the season it became necessary to redistribute the power supplied for life test purposes so as to increase the total load on the cables supplying the life test apparatus.

The amount of life testing done for parties outside the Commission is a small proportion of the total amount of life testing completed.

Two types of lamps have been added to the lines regularly handled by the Commission. These are the mill type in 25 and 50 watt sizes and a range of vacuum lamps for street railway service. The design of these lamps was based upon data obtained from tests at the laboratory.

#### **Switchboard Signal Lamps**

Life tests of switchboard signal lamps were made during the year in addition to tests of regular standardized types.

#### **Design of Lighting Installations**

A few lighting installations were planned for engineering and municipal departments.

#### **Illumination Surveys**

The importance of the proper selection of lighting units is indicated by the results of two illumination surveys, one in an educational institution and the other in a large office building. The selection of units in both cases was based on the results of the tests.

#### **Commercial Tests**

Laboratory tests were made, for manufacturers, on new types of globes and reflectors.

#### **Tests on Glassware**

Tests have revealed the superior qualities of some new types of glass that are made into enclosing globes. These newer glasses produce practically perfect diffusion with a surprisingly high efficiency and without excessive weight.

An experiment was made to determine the relative properties of prismatic window glass and adjustable louvers for reducing glare resulting from skylight entering windows. It was found that prismatic glass can be utilized to direct a large percentage of skylight to the lower or to the upper part of a room with a resultant decrease of glare but that the most complete control can be secured with louvers.

#### **Automobile Headlamps**

The laboratory has conducted the tests of automobile headlight devices for the Department of Provincial Highways of Ontario.

In addition to this a number of tests have been made for outside parties on new designs for glare-reducing headlights. It is interesting to note that none of the devices of radically different design from those in use at the present have proved successful.

### **Engineering Materials Laboratory**

Previous reports have described the scope of the work of this section of the Laboratories so that it need not be further described here.

#### **Inspection**

With the increased constructional activity due to the extensions at Queenston and at Cameron Falls, Nipigon, and the new developments at Dam 8 on the Trent river and Bingham Chute on the Nipissing river, there has been a marked increase in the demand for inspection. This has included the structural steel for three power houses, four penstocks, several hundred transmission towers, a large highway bridge and much miscellaneous work of lesser magnitude. In addition, all the principal castings, both iron and steel, for all generators and turbines have been subject to rigid inspection and the progress of all work followed through the shops.

#### **Research on Concrete**

Continued study is being given to the problems of concrete and while no such active research is now in progress as was carried out during the years when the Queenston-Chippawa development was under construction, yet because of the Commission's large investment in concrete structures the safety of that investment requires consideration of many problems relating to concrete. The large amount of data already obtained through past experimental investigations was carefully reviewed during the year, reanalyzed in many cases, and an attempt made to appraise our present knowledge of the properties and performance of concrete. As a result of this it was found that certain important information was lacking which would be of great economic value to the Commission. Accordingly, a small programme of investigations in concrete and concrete materials, to be carried out over a period of years, was developed to supply this information. This programme is now under consideration.

### **Chemical Laboratory**

The Chemical laboratory, because of its special knowledge gained through the chemical examination of different materials, is asked to carry out investigations not strictly in the province of chemical research. An interesting case of this has been the experiments in spray painting of transmission towers made



during the past summer. Several towers were painted with different paints both by brushing and by spraying using compressed air and the results and costs compared. The tests proved the practicability of spray painting for this class of structure, but pending the completion of the work the results cannot be discussed in any detail.

#### **Paint Tests**

As in former years the subject of paints and their application has been given much study. After a careful review of the Commission's practice, it has been possible to standardize the colours to be used on the work of the Commission to twenty-four, applicable to the work of all departments. This will greatly simplify both the testing and purchasing of paints and will promote uniformity in the appearance of structure, equipment and rolling stock.

#### **Lubricating Oils and Greases**

Lubricating oils have also received detailed attention. Specifications for several classes of oil and greases have been prepared or are now in preparation, and it is hoped that during the coming year the purchase of lubricating oils can be placed on a specification basis.

#### **Specifications for Waste**

When preparing specifications for oil for railroad use it became evident that if a specification for car or journal oil was to result in any benefit, a specification for journal packing waste must also be developed, and studies to this end were undertaken. Substantial progress has been made and a tentative specification developed. The adoption of a standard specification for wool waste must await the confirmation of the Laboratories studies by experience with these wastes in operation.

### **Photographic and Blue Printing Branch**

The work of this department has been mostly along the regular lines of commercial work, i.e., outside and inside views, lantern slides, copies of all sorts, enlargements of various sizes, printing and mounting both by the dry press process and on cloth-covered stretchers. Progress photos were taken monthly at the Queenston development, trips were also taken to East Hamilton outdoor station, and over Toronto Suburban electric railways to show snow conditions. One of the outstanding jobs of the year was the making up of identification cards for the male employees, some 1,750 in all. This was arranged in several different ways: the local members in Toronto, Hamilton and Niagara Falls were photographed by this branch, those in other centres were photographed by local photographers and the negatives sent into the laboratory for finishing, while those at the more remote places were taken by the employees themselves with hand cameras and sent in for finishing. Considerable work was also done for the Engineering departments in the finishing of pictures made in the field and sent in for development.

The Blue Printing branch, while equipped with only one printing and one drying machine and being so remote from the head office as to require a special messenger, was able to take care of about twenty-five per cent of the total blue printing, 1,575 orders of various sizes having been completed.

## ELECTRICAL INSPECTION

In the Fifteenth Annual Report references were made to several aspects of the work performed by the Electrical Inspection Department. The work of this department increases with the growth of the Commission's operations. Every new municipality connected, even every new customer, adds something to the department's responsibilities. In the thirty-two inspection districts into which the Province is divided, there were, in the year ended October 31, 1922, over 90,000 applications received for permits for work to be done,\* and over 180,000 inspections were made.

Although the volume of work handled by the Inspection department increases each year, its character remains substantially the same. It is, therefore, unnecessary to refer each year to matters previously dealt with, unless there is some special feature to record. In last year's Annual Report reference was made to the inspection work entailed in connection with defective installations, with the increase in the number of electric cooking ranges installed, and with the extension of the Commission's lines into rural districts. Reference was also made to the very small number of fires and accidents in the Province due to the use of electricity; to the work of the committee on Rules and Regulations and to "electrical homes."

### Rules and Regulations

A revision of the Commission's "Rules and Regulations for Inside Electrical Installations" has been prepared by a small sub-committee of the Rules and Regulations committee and it is expected that a new and revised edition of the book will be published early in 1924. This work is being carried out in a thorough manner so as to bring the whole of the rules up to date and in line (so far as Ontario conditions render it desirable to do so) with the provisions of the new (1923) edition of the "National Electrical Code."

One or two matters which bear some relation to the work of the Inspection department may be worth recording here.

### Licensing of Electrical Contractors and Workers

During 1923, representatives of the Electrical Workers' unions and the Contractors' association were successful in inducing the Toronto city council to pass a by-law, relating to the licensing of electrical contractors and workers, which is to become operative at the beginning of next year. It is hoped by those who sponsored the by-law that its effect will be to raise the standard of workmanship in electrical installations by ensuring a good knowledge of electrical work on the part of those undertaking it. A member of the staff of the Electrical Inspection department is a member of the Board of Examiners appointed under the provisions of this by-law.

### Electrical Homes

In last year's Annual Report mention was made of an "electrical home" which was equipped in Toronto to demonstrate the practical requirements and to indicate to the public an ideal way in which houses should be wired. Actually, two electrical homes were so equipped in Toronto, this work being carried out by an organization formed early in 1922 for that specific purpose, bearing the name "Electric Home League." In 1923 the name was changed to "Electric Service League" to enable the scope of its activities to be widened, and its Board of Directors, which includes a member of the Commission's staff as well as a member of the Toronto Hydro-Electric System, was enlarged.

## SECTION VIII

### ELECTRIC RAILWAYS

#### ESSEX DISTRICT RAILWAYS

##### Way and Structures

The rehabilitation of the entire system was proceeded with. The more important improvements were as follows:

On Sandwich street east between Goyeau and Victoria roads the double track which existed on the northerly side of the street was replaced with a single track and two passing sidings. Block signals were installed. The new construction consisted of 85-lb., C.P.R.-section, relay rail laid in open construction on ties, fully tie-plated throughout, in crushed-stone ballast, located to the north of a 6-inch concrete curb. This construction eliminated a dangerous condition and has very materially improved the operating conditions. The entire deck and the track approaches on Peabody's bridge were removed and replaced by heavier construction, and a guard rail was installed on the approaches. From Peabody's bridge to Strabane avenue a new single track was constructed using 80-lb. A.S.C.E. rail with twin steel ties laid in concrete. On Sandwich street east, from Maisonneville avenue easterly to Strabane avenue, the track was moved from the north side of the street to the centre, very materially improving conditions over this section. A new diamond was inserted by the Canadian National Railways on Sandwich street between Belle Isle and Cadillac streets for an industrial siding serving the Ford Motor Company.

On the Tecumseh division at Stop 17 an industrial siding was installed for the town of Riverside, using 56-lb. rail laid on treated ties with tie plates, lined and surfaced on crushed-stone ballast. On the Tecumseh division at Stop 27 a new passing siding was installed, using 56-lb. relay rail, creosoted ties, and tie plates, lined and surfaced on crushed-stone ballast. With the exception of that portion of the railway situated within the town limits of Riverside the entire Tecumseh division is now rock ballasted and, with the completion of bonding and other improvements, the line is now in first-class operating condition. A standard shelter was erected at Little River.

New double-track construction was started on Erie street, Parent avenue and Ottawa street and with the exception of that portion laid on Parent avenue the construction consists of 80-lb., A.S.C.E.-section rail, 60 feet long, laid on steel ties imbedded in concrete, with trap-rock wearing surface. The section on Parent avenue was laid, excepting intersecting street crossings, with 80-lb., A.S.C.E.-section rail, 60 feet long, on creosoted ties with tie plates, and crushed-stone ballast.

On Wyandotte street, Walkerville, new steel poles of joint ownership were erected, on which lighting brackets were installed by the town of Walkerville.



On the Amherstburg division several miles of crushed-stone ballast were placed and a large number of old ties were replaced by treated ties with tie plates. Practically the entire division was covered through lifting and surfacing operations. A new section tool house was erected at Amherstburg.

### Equipment

An additional express car was placed in service early in the year and as traffic continued to increase it was found necessary in the autumn to secure an extra car.

Four new double-truck safety cars ordered during the preceding year were placed in service during the summer. This type of car has proved very satisfactory, especially for handling the "peaks" caused by the arrival of the ferry at Windsor. The urban municipalities served by the railway are developing very rapidly, causing a corresponding increase in traffic, and the double-truck car is now required for a considerable portion of the day. Special men have been detailed at heavy loading points to assist the single operator on these cars and the flexible control of the doors of the car permits the collection of fares at two positions, thus assisting in cutting down dead time at heavy loading points. The layout of these cars with their wider aisles and larger vestibules follows the latest approved standards. The additional motor capacity and strength that have been provided in the car body have been amply justified, and experience has shown that the Commission was well advised in not adopting the extreme, small-motor, light-weight car.

The Commission has endeavoured to make such improvements and repairs to the old rolling stock as are justified in order to obtain the full life of this equipment. The Commission has called for tenders on eight additional double-truck safety cars, very similar to those placed in service during the past summer. Automatic couplers and multiple-unit type of control will be provided, as well as the standard safety air-brake equipment, which should make these cars more flexible for the traffic demands. Special attention is also being paid to the control of the doors, with the idea of still further decreasing the time required for loading and unloading.

### Operation

The Commission is pleased to report that the rehabilitation of the Essex division has been practically completed. Other anticipated improvements are under way, and the result of the last year's operation shows quite clearly that the revenue estimated by the Commission has been exceeded, while the cost of operation has been slightly less than that anticipated.

The population in the districts served by the railway has steadily increased for a number of years past. The increase in Windsor, which may be taken as representative, is as follows:

1919.....	7.79	per cent
1920.....	14.90	" "
1921.....	3.66	" "
1922.....	8.53	" "
1923.....	12.00	" "

The city of Windsor has 73 miles of street paving and 24 miles of alley pavement, with approximately 82 miles each of sewer and of water mains. Building permits for the last five years have averaged more than 1,200 per year.

The population to the acre—15.99—is exceeded only by Toronto with 26.08 and Ottawa with 22.14, Hamilton being fourth with 15.42. The population has grown until the Border Cities now have a population of practically 92,000 people.

It was anticipated that the Ford Motor Company, on the completion of the reconstruction and enlargement of its factory, would employ about 7,000 men. This anticipated total has not as yet been reached. The factory is practically completed, and the company expects to increase substantially the number of its employees during the fall of 1924.

It will be noted from the accompanying graph that the revenue continues to increase yearly at a very satisfactory rate, and that the operating expenses have decreased in proportion to the car mileage operated. The graph indicates that many of the conditions existing at the time the railway was taken over have been changed and that the railway line, in general, shows a very healthy growth. A number of sidings have been constructed into industries situated in proximity to the lines, and this has resulted in the freight revenue increasing from approximately \$6,000 per year in 1919 to \$50,570 for the year ending October 31, 1923. The gross revenue in 1919 was \$377,000, while in 1923 it had grown to \$688,416.

The Commission estimated that the reconstruction would be practically completed in 1922, and while the statement for that year showed a deficit of \$4,385, it is very gratifying to note that there is a surplus of \$34,463 for the year ending October 31, 1923, which is being held in reserve for depreciation. The operating expenses for the year averaged 27.406 cents per car-mile operated, notwithstanding the fact that a large sum was spent in rebuilding old equipment and charged to operation.

Automatic block signals have been installed on the Tecumseh division on Sandwich street between Ouellette avenue and Victoria road in Walkerville. This protection will, in the early spring, be further extended to the Ford City limits, a distance of about two miles.

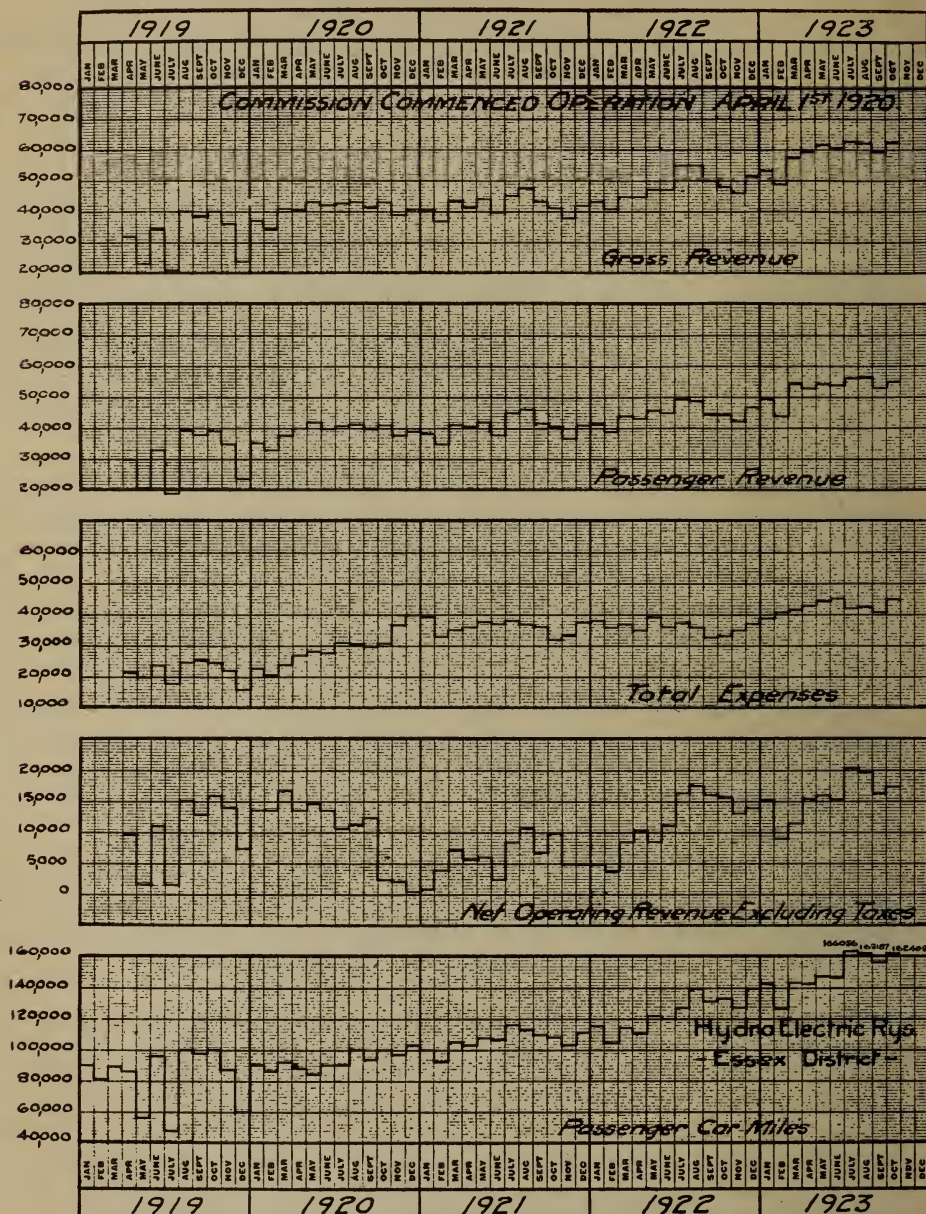
The trackless-trolley line on Erie avenue and Ottawa street has been discontinued and is being replaced by a double-track railway line in order to take care of this rapidly growing section. (Since this work has been completed the revenue that was secured by the trackless trolleys, which amounted to approximately \$750 a month, has grown to approximately \$9,500 a month.)

The operation of one-man cars in this section has been satisfactory. The contention that the operation of one-man cars results in more accidents than two-man operation has been disproven by the records of two years' operation. For the year ending October 31, 1923, the one-man safety cars were operated a total of 759,341 car-miles, and the accidents amounted to 26.47 per 100,000 car-miles, the cost of which was 0.47 cents per car-mile. The single-truck two-man cars were operated a total of 355,852 car-miles, and notwithstanding the fact that they operate in a less congested district (being used only on the outskirts) the accidents, per 100,000 car-miles, were 22.76, the cost of accidents amounting to 0.503 cents per car-mile. The trackless trolleys, operating 82,053 car-miles, were responsible for 17.06 accidents per 100,000 car-miles, the cost being 0.395 cents per car-mile. This is also one-man operation. The total accidents were 20.59 per 100,000 car-miles and the cost was 0.416 cents per car-mile.



## ESSEX DISTRICT RAILWAYS

## Operating Statistics



Notes: 1919—May and July, strikes. December, power interruption.

1921—Fare increased from 6 for 25 cents to 5 cents straight, effective July 1.

1922—Fare increased to 6 cents cash, 20 tickets for \$1.



Records for 13 railway companies in the United States, operating 18,022,899 one-man car-miles, show 38.01 accidents per 100,000 car-miles, while the two-man cars operating, under like conditions, 13,868,097 car-miles, were responsible for 57.55 accidents per 100,000 car-miles.

New equipment is being ordered to provide for the increased passenger traffic which is now growing at the rate of about 110,000 or 120,000 passengers per month.

The car-miles operated in 1919 (the year before the Commission took over the line) were approximately 1,000,000. The mileage for the year ending October 31, 1923, is approximately 1,800,000.

The following operating statistics are interesting and explain themselves:

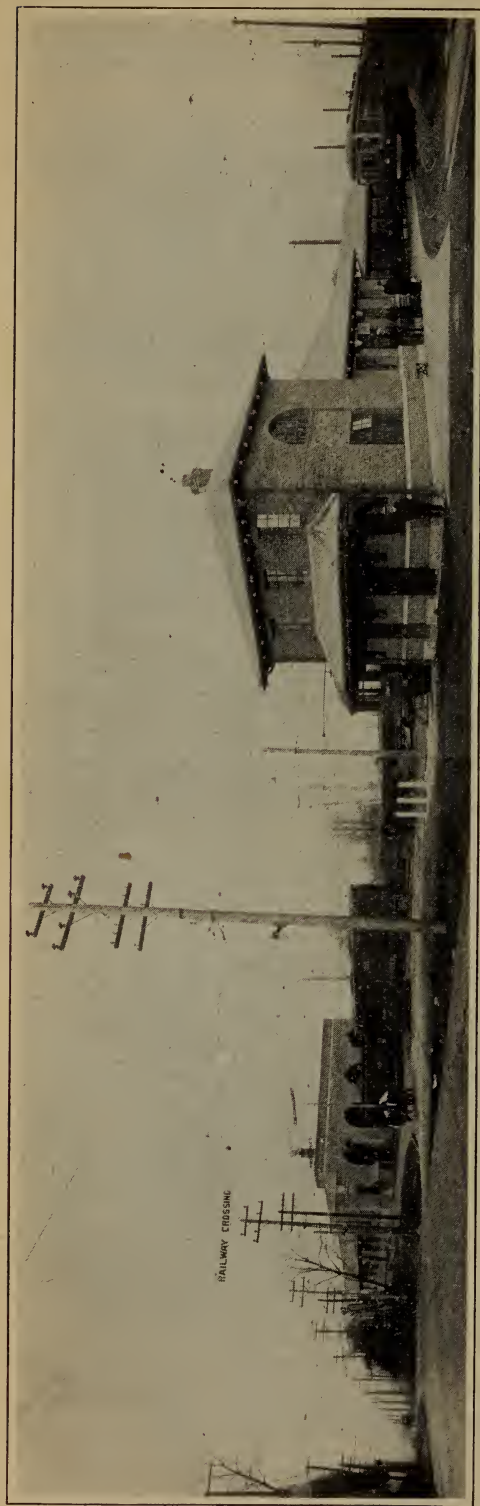
### ESSEX DISTRICT RAILWAYS

#### Operating Statistics

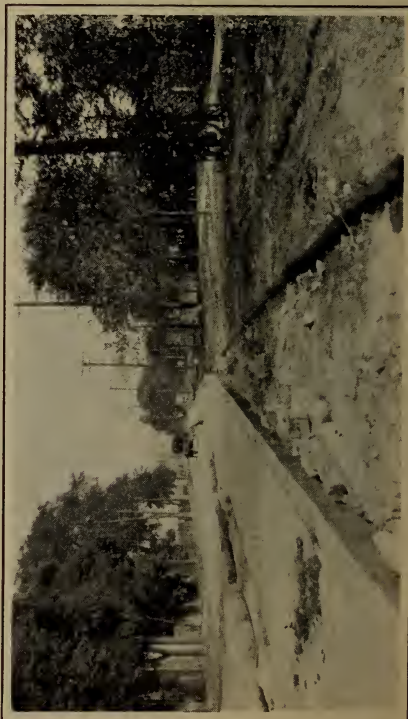
Route-miles:		
City trolley.....	15.11	
City trollibus.....	5.01	
Amherstburg interurban.....	13.54	
Tecumseh interurban.....	6.11	
Total route-miles.....		39.77
Passenger and freight car-miles operated.....	1,825,171	
Passenger and freight car-hours operated.....	217,486	
Average number of employees.....	200	
Accidents.....	375	
Passengers carried.....	12,318,236	
Percentage of transfer passengers to revenue passengers.....	14.7	
Passenger cars operated.....	55	
Passengers carried per route-mile.....	309,736	
Passengers carried per car-mile.....	6.9	
Passengers carried per car-hour.....	58.8	
Average mileage per car operated.....	32,232	
Average passengers per car operated.....	223,968	
Average riding (revenue) habit.....	137.7	
Freight tonnage carried.....	19,989	

### COMPARATIVE FIGURES SHOWING GROWTH

Year.....	1920-21	1921-22	Percentage of 1920-21	1922-23	Percentage of 1920-21
	\$ c.	\$ c.	%	\$ c.	%
Passenger earnings.....	488,185.92	526,982.29	107.8	625,601.43	128.1
Freight earnings.....	9,883.36	19,470.44	197.0	50,570.37	511.6
Miscellaneous earnings.....	7,757.56	10,339.95	133.2	12,244.98	157.8
Gross earnings.....	505,826.84	556,792.68	110.1	688,416.78	136.5
Operating expenses.....	426,604.43	436,910.98	102.4	500,202.26	117.2
Net earnings.....	79,222.41	119,881.70	151.3	188,214.52	237.5



Joint Terminal at North Toronto of the Metropolitan Division of the Toronto and York Radial Railways and the Toronto Transportation Commission



Sandwich Street, Ford, September 25, 1923



ESSEX DISTRICT RAILWAYS

Tecumseh Section, November 16, 1922

## GUELPH DISTRICT RAILWAYS

### **Way and Structures**

The city of Guelph granted authority to completely revise the track work surrounding St. George's square by cutting through the middle of the square and constructing concrete platforms to facilitate the loading and unloading of passengers.

The stub siding on Elora road near Clark street was made a through siding; and a new siding was constructed on York road to facilitate operation.

Other minor changes included the replacement of a wooden culvert by a concrete culvert on Suffolk street and revision of tracks serving the Guelph Carpet Company.

An order of the Board of Railway Commissioners was issued covering the installation of an electrically-operated interlocking plant at the crossing of the Guelph Radial Railway by the Canadian Pacific Railway on Elora road to replace existing half-interlocked plant. This work has not yet been performed.

### **Equipment**

During the current year extra heaters were installed in the new safety cars to make them more comfortable for the extreme weather conditions that obtain in Guelph. Other minor changes have been made in the equipment which now appears to meet the traffic conditions much more economically than the old double-truck car equipment which it replaced.

When the Commission prepared its first report on the Guelph street railway, some four years ago, there was a scarcity of rolling stock and the second-hand value of cars was, therefore, at a peak. There were delays in transferring the street railway to the Commission and still further delay on the part of the manufacturing companies in filling the Commission's order for the new safety cars. After these were delivered it was found that there was practically no market for the old double-truck cars. They were carefully gone over and the Commission is now transferring this equipment to one of its other lines where the bodies will be rehabilitated and new trucks, motors, etc., supplied.

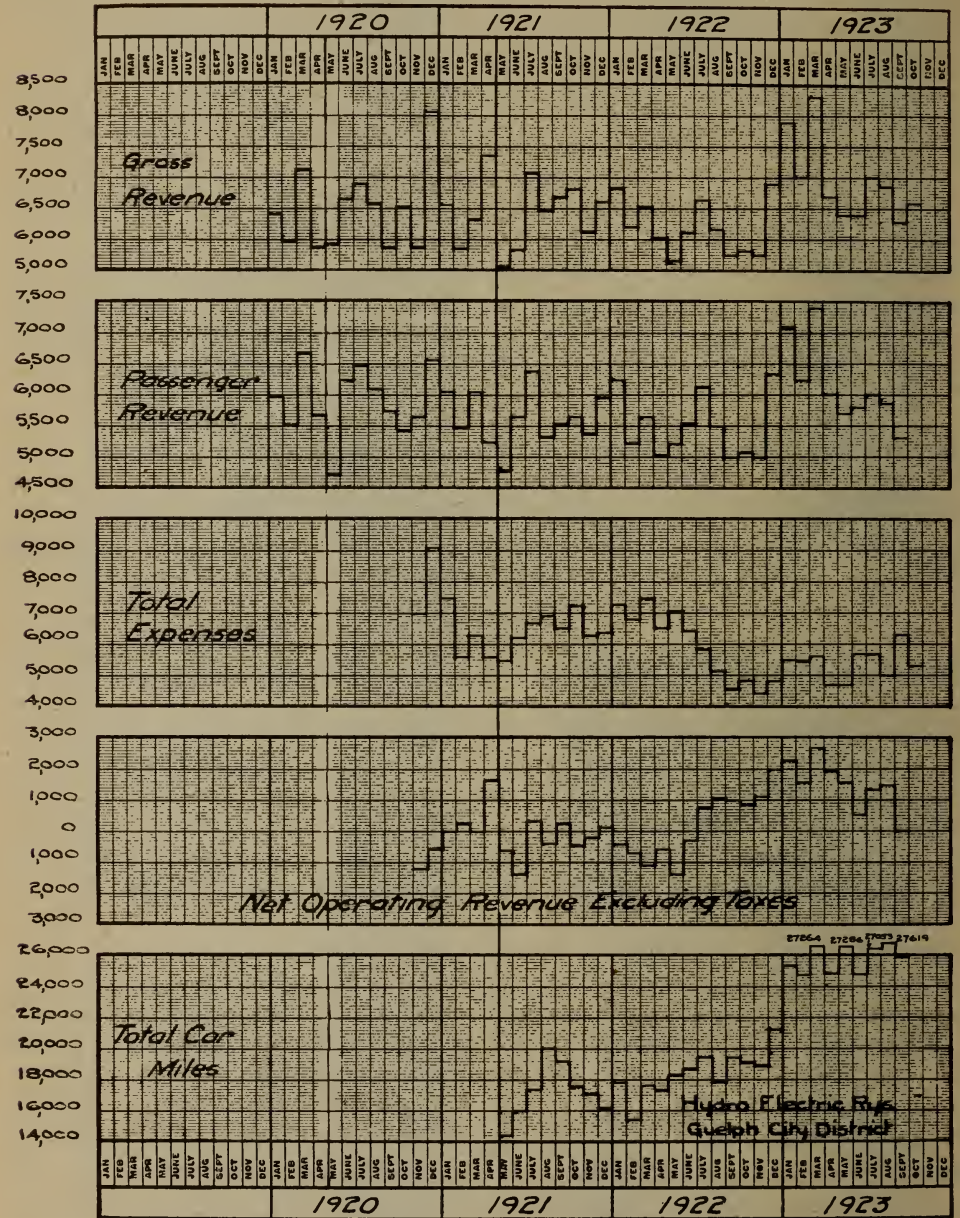
### **Operation**

The rehabilitation of the Guelph District Railways was completed during the year, with the exception of a portion of the track on the York road line from Carden street to Waterloo street through the Canadian National subway, and the line is now operating with very few delays and is giving a regular service.

The monthly car-mileage has increased from approximately 14,000 to 27,600 car-miles. The one-man car operation has proved very successful and has decreased the cost of operation, as a glance at the accompanying chart will show. The operating expenses have decreased, notwithstanding the fact that there has been a very heavy increase in car-mileage. The industrial conditions in Guelph have been such, for the past year, that the revenue shows a very slight increase. The closing of the summer term of the Agricultural College, and the absence of excursions from various points in Ontario during the summer months, decreased the revenue to a certain extent.



GUELPH DISTRICT RAILWAYS  
Operating Statistics



Note: Operation by Hydro-Electric Power Commission commenced on May 1, 1921

The net deficit for the year, payable by the city of Guelph, amounted to \$12,982.12 as compared with \$22,911.51 for the previous year, notwithstanding the fact that the interest charges increased on account of the additional capital expended. In addition to the above, \$1,264.16 was set aside as a provision for unredeemed tickets. The value of one of the car barns, amounting to approximately \$600, was written off capital, the barn having been destroyed by a wind-storm, and \$256.30 was written off the valuation and other expenses in connection with the purchase of the line by the Commission. The accidents on the line amounted to 80 in number, most of which were of a minor character.

The following operating statistics will prove interesting:

### GUELPH DISTRICT RAILWAYS

#### Operating Statistics

Route-miles.....	8.49
Passenger and freight car-miles operated.....	300,577
Passenger and freight car-hours operated.....	37,503
Average number of employees.....	28
Accidents.....	80
Passengers carried.....	1,521,171
Percentage of transfer passengers to revenue passengers.....	14
Passenger cars operated.....	7
Passengers carried per route-mile.....	156,237
Passengers carried per car-mile.....	4.4
Passengers carried per car-hour.....	37.5
Average mileage per car operated.....	42,931
Average passengers per car operated.....	189,495
Average riding (revenue) habit.....	72.1

### TORONTO AND YORK DISTRICT RAILWAYS

#### Way and Structures

*Metropolitan Division:* Formal operation of the Toronto and York Radial Railway was assumed by the Commission on November 1, 1922, on behalf of the city of Toronto. The tracks of this division from the north city limits south on Yonge street to St. Clair avenue were removed and a new joint terminal with the Toronto Transportation Commission was constructed on the east side of Yonge street at the city limits.

A combined car barn and freight shed, joint passenger station, shelter and platform, oil shed and yard trackage were constructed in lieu of the terminal formerly operated at the corner of St. Clair avenue and Yonge street. The property for the new terminal was acquired and the layout of passenger tracks, platform and shelter was made in collaboration with the Toronto Transportation Commission which makes joint use of the facilities provided.

Owing to the construction of permanent pavement by the Department of Public Highways it was necessary to remove the sidings at Bayles, Finches, Morgans and Thornhill and to replace them to the east of the existing main line. New passing sidings were constructed at York Mills, Deans Gate, Garden avenue, Orange Lodge and Bassetts with 80-lb., A.S.C.E. rail, laid on creosoted ties with tie plates. The siding at Bassetts necessitated the erection of two small steel girder bridges. Industrial sidings were constructed at Willowdale for the Lake Simcoe Ice Company and at Westwood Lane, Wilcox Lake and Richmond Hill for the Warren Bituminous Company. A new pile trestle was constructed across the Maskinonge river replacing the old structure. Other work included the installation of new paved crossings from the west to the east side of



Yonge street at the Mausoleum; the replacement of heavy steel from the Mausoleum crossing to the north end of Bayles siding; the lifting and resurfacing of two miles of track south of Thornhill; the removal of a girder bridge on the north branch of the Don river at Thornhill, its replacement by a concrete arch and the resurfacing and lifting of track through Thornhill hollow; the replacing of one and one-half miles of 60-lb. steel with 80-lb., A.S.C.E. rail from Bond Lake south; the realigning of track at the north and south end of Bond Lake tracks to conform to the Department of Public Highways' requirements and the placing of steel tie plates on all treated ties installed in track. A number of other minor changes and additions were made, such as the extension of culverts, the erection of signs, the re-location of stops, and the erection of a standard shelter at Thornhill to conform to the improved standards of the railway. A small timber bridge situated on the Schomberg section at mile 6.8 collapsed and was replaced by a four-foot concrete pipe and fill.

A combined lavatory and activated sewage disposal plant was constructed at Bond Lake park. A new feeder was erected extending from York Mills to Bond Lake to improve power conditions on the line. The installation of new sidings, the improved track conditions, and the system of block signals which it is proposed to install will materially improve operating conditions.

*Scarboro Division:* A number of changes were made in connection with the track work by shifting or altering the grade to conform to the Department of Public Highways' permanent pavement in the vicinity of old Stops 26, 27, 33 and 37.

A number of concrete culvert extensions were built, in connection with drainage crossing under the tracks of the railway, to replace those of timber construction which had outlived their usefulness.

*Mimico Division:* A new passing-siding 500 feet long was installed at old Stop 26 to improve operating conditions.

#### **Equipment**

*Metropolitan Division:* Upon transfer of the city terminal from Farnham avenue to the northerly boundary of the city at Stop 26, it was found necessary to purchase four freight motor trucks in order to take care of the additional haul between these two points and also to permit the older and smaller trucks to be used entirely on the lighter shipments. It was also found desirable to purchase two differential, dump cars and thirteen rebuilt, steel, flat cars for the efficient handling of material used in various building operations being conducted along the line of the railway.

The removal of the city terminal to the northerly city limits also involved the expense of moving the shop machinery and tools which were formerly located at St. Clair avenue barns. Some additional equipment, such as pit jacks, lockers, furniture and other tools, was also purchased at the same time.

The change in the terminal made it necessary, also, to install air compressors on some twenty cars, since it was no longer feasible to use the storage air system with the compressors located at St. Clair avenue barn. A small expenditure was also incurred to furnish classification and marker lights required for the new system of operation under train orders.

During the current year the power layout of the Metropolitan railway was improved by the installation of eight miles of six hundred-volt feeder cable extending southward from Bond Lake to give better voltage in the vicinity of Thornhill. Some spare motors and armatures were purchased in order to insure more reliable power. One of the existing motor-generator sets in Bond Lake



substation was transferred to Sedore where a new brick substation building had been constructed. This set was replaced by a 900-kv-a. synchronous, motor-generator set which has improved to a considerable degree the regulation of the power line. Plans are now being prepared for the closing of the Keswick substation which is located in an old steam-power plant. The equipment at Keswick will probably be removed southward to Ravenshoe in order to improve the trolley voltage on the Queensville grade and to give a better division of the load between Newmarket and Sutton.

*Scarboro Division:* Arrangements are now being made to transfer five double-truck, suburban-type street cars from the Guelph District Railways to the Scarboro division. These will be entirely overhauled before being placed in service and will be equipped with safety air-brake apparatus, pneumatically-operated doors and other modern features which should permit more efficient and satisfactory handling of the Scarboro traffic than is possible with the present worn-out cars.

Plans are also under way to re-locate the substation on this division nearer the centre of the line. This change should improve the trolley voltage at West Hill and give more reliable and efficient distribution of power. An attempt is being made to build a combined power and railway station which should result in more reliable service to the power customers and a saving in expenses to the railway.

*Mimico Division:* During the year a new substation has been erected at the west end of this division near Lakeview post office, the construction being carried out entirely by the railway operating department with equipment secured from the Niagara Power development, where it had been used during the construction period. The installation of this station should permit more efficient operation, due to better trolley voltage on the west end of the railway. Plans are being prepared for the removal of the present Humber station to a point closer to Mimico.

Orders have been given for the supply of four double-truck modern street cars provided with special equipment, such as pneumatically-operated door engines, etc., which will permit the cars to load and unload at the Toronto terminal with a minimum of delay. These cars may also be operated in trains up to three cars to handle excursion and peak-load business.

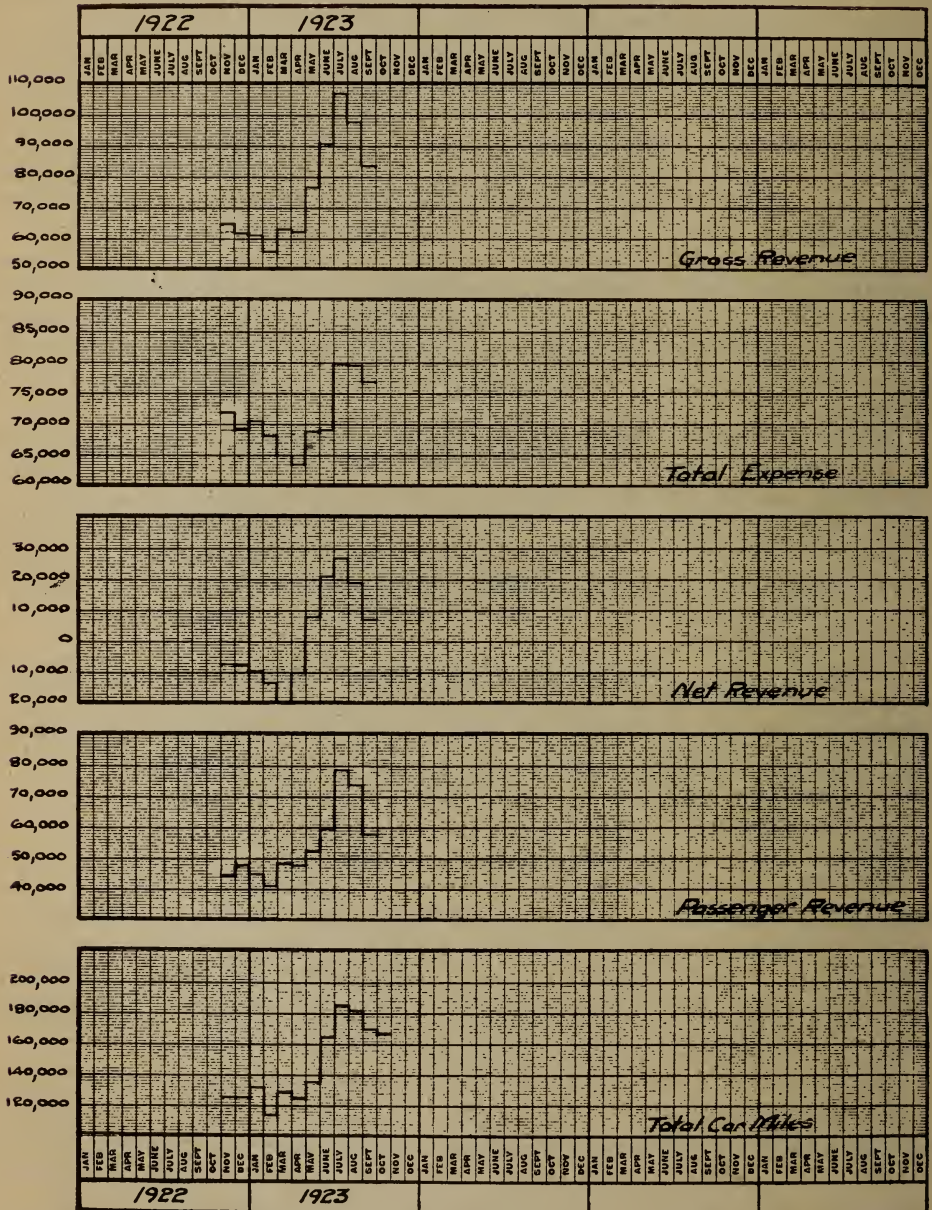
### Operation

The Toronto and York Radial Railways have been operated by the Commission since November 1, 1922, but in connection with the operating statement it is not possible to present comparative results for previous years because the records which have been kept in the past included the revenue and the mileage of the local service which was operated in connection with the Metropolitan division from Farnham avenue to what was then known as Stop 26 and is now the new terminal for the interurban lines.

The operation of the system for the year ending October 31, 1923, shows a net deficit of \$204,505.21. This deficit is accounted for by the loss of the revenue formerly received from the local line operation and the inability to decrease the operating expenses in the same ratio. The discontinuance of the local service occasioned a loss of six cents per passenger, being the amount of reduction in interurban fare which became effective with the change of terminal location which shortened the interurban journey. The gross revenue also shows a reduction on account of the transfer of the revenue received from the sale of power, from railway revenue account to that of the power department.

## TORONTO AND YORK DISTRICT RAILWAYS

## Operating Statistics





After a very careful investigation, the Commission has recommended a further capital expenditure of approximately \$2,000,000 for the rehabilitation of the line and the purchase of new equipment. When these changes have been completed it is believed that these railways can be put on an operating basis that will take care of all necessary charges and permit of a certain amount being set aside for depreciation.

*Metropolitan Division:* During the past year improvements have been made in track and overhead equipment and also in power distribution, which permit a close adherence to the schedules. These improvements, in conjunction with the new system of train despatching which has eliminated considerable delay in the movement of cars and also has reduced the work required of the trainmen, will permit of the speeding up of the service as soon as new equipment is received. The present electrical equipment of the lines is in bad condition and costs considerably more to maintain than will the new modern type recommended. The Commission has installed block signals between the terminal at old Stop 26 and Morgans, which distance practically covers the local service. These signals prevent unnecessary delays at switches and constitute an additional safety feature. The additional new sidings which are being installed between Toronto and Newmarket will provide added facilities for the further increase of train operating speeds.

*Scarboro Division:* On the Scarboro division five cars formerly operated on the Guelph Radial Railway will be put into service in June. These cars have been entirely rebuilt and will be equipped with new motors and trucks of standard gauge. The door operation will be such as to permit of one-man or two-man operation and will tend to reduce the operating costs of this division.

*Mimico Division:* On the Mimico division, pending the determination of the policy and location of the terminal, very little work, other than maintenance, has been carried out. Formerly the Toronto and York Radial operated a 40-minute service to Port Credit and a 20-minute service to Etobicoke Creek. This has been changed to a 20-minute service to Port Credit and a 10-minute service to Etobicoke, but with the present location of sidings and turnouts there are too many delays. However, with the increased power facilities, which have been taken care of, and the proposed track changes, which the Commission purposes making at an early date, it is believed that this service can to a certain extent be speeded up. Four new double-truck, one-man, two-man cars are on order for this division and delivery is expected in May or June, 1924. When these cars are received it will be necessary to standardize the track gauge on this division.

The accompanying graph and operating statistics cover the result of the year's operations.



## TORONTO AND YORK RADIAL RAILWAYS

## Operating Statistics, 1923

## Route Miles—1923

Metropolitan and Schomberg and Aurora division.....	63,100	miles
Scarboro division.....	8,349	"
Mimico division.....	8,620	"
<b>TOTAL.....</b>	<b>80,069</b>	<b>"</b>

## Passengers carried—1922-1923

Metropolitan and Schomberg and Aurora division.....	1,969,800
Scarboro division.....	1,261,628
Mimico division.....	3,760,299
<b>TOTAL.....</b>	<b>6,991,727</b>

## Accidents—1922-1923

	Metropolitan division	Scarboro division	Mimico division
Passengers killed.....	0	0	0
Passengers injured.....	16	8	8
Employees killed.....	0	0	0
Employees injured.....	7	3	1
Others killed.....	0	0	0
Others injured.....	9	1	4
Collision of cars.....	3	0	2
Derailments.....	2	1	3
Passengers hurt boarding cars.....	1	1	0
Passengers hurt alighting from cars.....	13	4	5
Vehicles and animals struck.....	15	1	2
Automobiles struck.....	36	14	30
Pedestrians hit by car.....	2	1	4
Passengers falling from cars.....	0	0	0
Passengers hurt while on cars.....	1	1	1
Miscellaneous accident and occurrences (including track and shop dept.).....	25	8	10
<b>TOTAL.....</b>	<b>98</b>	<b>31</b>	<b>57</b>

## Passenger Car-Miles Operated

Metropolitan and Schomberg and Aurora division.....	723,553
Scarboro division.....	331,750
Mimico division.....	588,982
<b>TOTAL.....</b>	<b>1,644,285</b>

## Passengers Carried per Car-Mile

Metropolitan and Schomberg and Aurora division.....	2.72
Scarboro division.....	3.80
Mimico division.....	6.38

## Passengers Carried per Route-Mile

Metropolitan and Schomberg and Aurora division.....	31,217
Scarboro division.....	151,111
Mimico division.....	436,229

## Average Mileage per Car Operated

Metropolitan and Schomberg and Aurora division.....	38,081.736
Scarboro division.....	55,350.000
Mimico division.....	36,811.375

## Average Passengers per Car Operated

Metropolitan and Schomberg and Aurora division.....	103,673.6
Scarboro division.....	210,271.3
Mimico division.....	235,018.7

## Freight Tonnage Carried

Total freight.....	130,616	tons
Freight tonnage per car-mile.....	0.981	ton
Freight revenue per car-mile.....		\$1.30
Freight revenue per route-mile.....		\$2,735.47
Freight revenue per ton.....		\$1.52

# **ELECTRIC RAILWAYS**

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**FINANCIAL STATEMENTS**

**OF THE**

**ESSEX DISTRICT RAILWAYS**

**THE**

**GUELPH DISTRICT RAILWAYS**

**AND THE**

**TORONTO AND YORK DISTRICT RAILWAYS**

**SANDWICH, WINDSOR & AMHERSTBURG RAILWAY AND THE**  
**Statement of Assets and**

ASSETS

Road and equipment rights, franchises and goodwill of the Sandwich, Windsor & Amherstburg Railway and of the Windsor & Tecumseh Electric Railway Company.....	\$3,118,956.69
Construction material on hand.....	54,542.05
Materials and spare equipment.....	\$54,936.13
Stationery, tickets and other supplies.....	3,691.86
Accounts receivable.....	6,831.49
Cash in bank.....	10,009.87
	75,469.35
Detroit United Railway—In respect of bond interest accrued.....	1,575.00
Valuation and other expenses re purchase of plant assets and capital stock of these companies by the Hydro-Electric Power Commission of Ontario.....	\$17,795.45
Less four-tenths written off.....	7,118.18
	10,677.27
Insurance unexpired.....	4,156.46
Expenses prepaid.....	3,127.69

\$3,268,504.51

**SANDWICH, WINDSOR & AMHERSTBURG RAILWAY AND THE**  
**Combined Operating Account for the**

Transportation expenses.....	\$223,582.41
Maintenance—way and structures.....	51,576.69
Maintenance—equipment.....	81,631.71
Power.....	65,071.86
General operating and management expenses (Windsor office)....	31,952.18
Proportion of administration and accounting expenses chargeable to the operation of the railway.....	15,755.98
Taxes.....	3,247.75
Insurance.....	28,851.89
Written off valuation and other expenses re purchase by Hydro-Electric Power Commission of Ontario.....	1,779.54
	\$503,450.01
Bond interest (paid by the Detroit United Railways under agreement dated January 14, 1920).....	60,682.76
Interest on borrowings.....	91,755.00
Interest on debentures, \$2,039,000.00, issued by the Hydro-Electric Power Commission of Ontario to cover the purchase price of the plant assets and capital stock of the railway company.....	34,463.51
Net surplus for the year, carried to appropriation account.....	\$690,351.28

**Appropriation**

Set aside as a reserve for renewal of road and equipment.....	\$42,901.03
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\$42,901.03



**WINDSOR & TECUMSEH ELECTRIC RAILWAY COMPANY****Liabilities, October 31, 1923****LIABILITIES****Capital Stock:**

Sandwich, Windsor & Amherstburg Railway—2,970 shares of par value of \$100.00 each.....	\$297,000.00	
Windsor & Tecumseh Electric Railway—1,000 shares of par value of \$100.00 each.....	100,000.00	
General reserves.....	1,243,839.58	
		\$1,640,839.58

**Bonded Debt:**

Windsor & Tecumseh Electric Railway Co. first mortgage 5% gold bonds due September 2, 1927.....	\$189,000.00	
Interest accrued to October 31, 1923.....	1,575.00	
		190,575.00

**Hydro-Electric Power Commission of Ontario:**

In respect of the 4½% bonds due 1960 issued by the Commission for the purposes of the railway.....	\$61,000.00	
In respect of the 6% bonds due 1961, issued by the Commission for the purposes of the railway.....	900,000.00	
	\$961,000.00	

In respect of demand loan from the Bank of Montreal, obtained by the Commission, secured by the \$966,205.00 5% bonds due 1943 issued by the Commission for the purposes of the railway.....	400,000.00	
	\$1,361,000.00	

Less—A portion of the proceeds of loan, held, for the time being, by the Commission.....	49,964.94	1,311,035.06
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Accounts payable and accrued charges.....	\$13,415.61	
Deposits to cover cost of customers' sidings.....	25.00	
Provision for unredeemed tickets.....	7,807.70	
		21,248.31
Premium on Hydro-Electric Power Commission 6% bonds.....		62,818.75
Reserve for renewal of road and equipment.....		41,987.81

\$3,268,504.51**WINDSOR & TECUMSEH ELECTRIC RAILWAY COMPANY****Year ending October 31, 1923**

Operating revenue.....	\$688,416.78
Interest from bonds of the city of Windsor.....	1,934.50

\$690,351.28**Account****CREDITS**

Surplus for the 2 years and 7 months ending October 31, 1922.....	\$8,437.52
Net surplus for year ending October 31, 1923.....	34,463.51
	<u><u>\$42,901.03</u></u>

## GUELPH RADIAL

## Statement of Assets and

## ASSETS

Road and equipment.....		\$417,313.14
Stores and spare parts.....	\$6,829.89	
Stationery, tickets and other supplies.....	218.33	
Accounts receivable.....	748.53	
Insurance unexpired.....	923.54	
Expenses prepaid.....	395.58	
Cash in bank.....	375.48	
		9,491.35
Valuation and other expenses re purchase of plant assets by the Hydro-Electric Power Commission of Ontario.....	\$2,563.00	
Less—three-tenths written off.....	768.90	
		1,794.10
Due by the city of Guelph:		
Operating deficit for year ending October 31, 1923.....	\$12,982.12	
Less—instalment on account of principal and interest payable November 1, 1923, under purchase agreement.....	5,850.00	
		7,132.12
		<u>\$435,730.71</u>

## GUELPH RADIAL

## Operating Account for Year

Transportation expense.....	\$21,611.15	
Maintenance—way and structures.....	7,397.66	
Maintenance—equipment.....	11,078.08	
Power.....	7,789.73	
General operating and management expenses.....	8,648.21	
Proportion of administrative expenses of the Commission chargeable to the operation of the railway.....	2,560.95	
Insurance.....	4,281.18	
Taxes.....	2,507.38	
Written off valuation and other expenses re purchase by the Hydro- Electric Power Commission of Ontario.....	256.30	
		\$66,130.64
Interest.....		17,059.75
Payment to city of Guelph, of instalment due May 1, 1923, and provision for payment due November 1, 1923:		
Interest for year.....	\$6,348.77	
On account of principal.....	5,351.23	
		11,700.00
		<u>\$94,890.39</u>

## RAILWAY

## Liabilities, October 31, 1923

## LIABILITIES

## Hydro-Electric Power Commission of Ontario:

In respect of the purchase price of the railway from the city of Guelph under agreement dated December 8, 1920.....	\$150,000.00	
Less—instalments paid on account of principal.....	10,239.17	
	<u>\$139,760.83</u>	
In respect of the 6% 1931 bonds issued by the Commission for the purposes of the railway.....	150,000.00	
Interest accrued thereon.....	4,500.00	
In respect of demand loan from the Bank of Montreal obtained by the Commission for the purposes of the railway, secured by \$150,000.00 Guelph Radial 6% 1942 bonds..	140,000.00	
	<u>\$434,260.83</u>	
Less—a portion of the proceeds of loan held for the time being by the Commission.....	10,059.42	
		\$424,201.41
Accounts payable and accrued charges.....	\$25.97	
Provision for unredeemed tickets.....	1,264.16	
		<u>1,290.13</u>
General reserve.....		10,239.17
		<u>\$435,730.71</u>

## RAILWAY

## Ending October 31, 1923

Operating revenue.....	\$81,908.27
Net deficit for year, payable by the city of Guelph.....	12,982.12

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\$94,890.39



**TORONTO AND YORK**  
**Statement of Assets and**

**ASSETS**

Radial Railway Properties:			
Metropolitan Division (including Schomberg)—			
Road and equipment.....	\$2,247,328.97		
Materials and supplies.....	137,239.09		
Office furniture.....	915.85		
		\$2,385,483.91	
Scarboro Division—			
Road and equipment.....		247,315.68	
Mimico Division—			
Road and equipment.....		268,501.87	
			\$2,901,301.46
Mortgages receivable.....	\$17,050.00		
Interest accrued thereon.....	219.11		
		\$17,269.11	
Accounts receivable (less reserve for doubtful accounts).....		15,850.88	
Cash in bank.....		14,552.46	
			47,672.45
Insurance premiums unexpired.....		\$9,940.35	
Expenses prepaid.....		3,580.90	
			13,521.25
Expenses incidental to the purchase of the Railways, less portion written off.....			29,425.89
Due by the City of Toronto:			
Operating deficit for the year ending October 31, 1923—as per Operating Account.....		\$195,252.14	
Less—Operating surplus, before making pro- vision for renewal of road and equipment, for the twenty-three months ending Octo- ber 31, 1922.....		18,624.71	
		\$176,627.43	
Less—Amount owing to the City of Toronto in respect of the operation of the City section of the Metropolitan Division in the twenty- three months ending October 31, 1922.....	\$101,720.55		
Interest on the above amount for the year ending October 31, 1923.....	5,086.03		
		106,806.58	
			69,820.85
			<u>\$3,061,741.90</u>

**TORONTO AND YORK**  
**Combined Operating Account for**

**EXPENDITURE**

	Metropolitan	Scarboro	Mimico	Total
	\$ c.	\$ c.	\$ c.	\$ c.
Transportation expenses.....	173,124.35	39,806.41	85,120.44	298,051.20
Maintenance—Way and Structures.....	106,906.15	14,614.01	14,891.16	136,411.32
Maintenance—Equipment.....	75,280.92	11,452.05	17,218.66	103,951.63
Power Costs.....	115,963.19	18,409.37	29,881.57	164,254.13
General operating and management expenses.	43,246.97	5,131.41	8,248.07	56,626.45
Proportion of the administrative and account- ing expenses of the Commission charge- able to the operation of the Railways....	31,208.32	4,172.47	6,788.07	42,168.86
Taxes.....	13,193.47	930.83	1,278.42	15,402.72
Insurance (fire and liability).....	24,278.32	4,478.32	8,901.46	37,658.10
Written off valuation and other expenses re- purchase by Hydro-Electric Power Com- mission.....	3,831.44	494.68	574.33	4,900.45
Total Operating Expenses.....	587,033.13	99,489.55	172,902.18	859,424.86
Interest: On bonds \$2,375,000.00 issued by the Hydro-Electric Power Commission to cover the purchase price of the Railways	112,500.00	14,400.00	15,600.00	142,500.00
Bank and other Interest.....	31,958.90	2,687.89	2,789.05	37,435.84
	<u>731,492.03</u>	<u>116,577.44</u>	<u>191,291.23</u>	<u>1,039,360.70</u>

## RADIAL RAILWAYS

## Liabilities, October 31, 1923

## LIABILITIES

Hydro-Electric Power Commission of Ontario:

Re 6% bonds maturing 1940, issued by the Commission in purchase of the Radial Railway Properties.....	\$2,375,000.00	
Cash advances out of borrowings from the Bank of Montreal (secured by \$600,000.00 Hydro Radial 6% bonds maturing in 1940. ....	\$600,000.00	
Less current account.....	14,590.81	
	585,409.19	
		\$2,960,409.19
Accounts payable and accrued charges.....	\$89,178.43	
Provision against claims for injuries and damages.....	8,302.02	
Provision for unredeemed tickets.....	3,852.26	
		101,332.71

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\$3,061,741.90

## RADIAL RAILWAYS

## Year Ending October 31, 1923

## REVENUE

	Metropolitan	Scarboro	Mimico	Total
	\$ c.	\$ c.	\$ c.	\$ c.
Passenger.....	356,822.59	85,749.15	207,898.11	650,469.85
Freight.....	172,608.01	....	....	172,608.01
Rentals of property, including amount charged Niagara system for use of poles.....	11,206.39	1,015.76	40.00	12,262.15
Miscellaneous.....	6,787.70	1,511.61	469.24	8,768.55
	547,424.69	88,276.52	208,407.35	844,108.56
Net deficit (or surplus) for year after payment of interest on the Bonds issued by the Commission to cover its investment in the Railways, but before making provision for renewal of Road and Equipment.....	184,067.34	28,300.92	(17,116.12)	195,252.14

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731,492.03 116,577.44 191,291.23 1,039,360.70

## TORONTO AND YORK RADIAL RAILWAY

## Summarized Operating Report for the Year Ending October 31, 1923

	METROPOLITAN DIVISION	SCARBORO DIVISION	MIMICO DIVISION
	\$ c.	\$ c.	\$ c.
Maintenance—way and structures.....	106,906.15	14,614.01	14,891.16
Maintenance—equipment.....	75,280.92	11,452.05	17,218.66
Power.....	115,963.19	18,409.37	29,881.57
Transportation.....	173,124.35	39,806.41	85,120.44
General and miscellaneous.....	102,565.05	14,276.88	24,511.93
Total.....	573,839.66	98,558.72	171,623.76
Revenue.....	547,424.69	88,276.52	208,407.35
Net revenue.....			36,783.59
Shortage.....	26,414.97	10,282.20	
Taxes.....	13,193.47	930.83	1,278.42
Interest.....	144,458.90	17,087.89	18,389.05
Deficit.....	184,067.34	28,300.92	
Surplus.....			17,116.12
Net deficit—all divisions.....		\$195,252.14	



## SECTION IX

### FINANCIAL STATEMENTS

#### EXPLANATORY STATEMENT RESPECTING THE ACCOUNTS

The Hydro-Electric Power Commission of Ontario believes that a satisfactory understanding of the manner in which the various operations of the Commission are financed will contribute greatly to the interest of those engaged either directly or indirectly with the work of the Commission.

In this section of its Annual Report the Commission presents detailed financial statements which may easily be understood although, upon casual inspection, they might appear somewhat complex.

For the purpose of financial statement, the various systems are treated as quite separate units for each of which similar statements and details are given. Many of the pages which follow, therefore, simply repeat for each system the class of data which is presented for the first system dealt with, namely, the Niagara system. In order, therefore, to possess a ready grasp of all the figures presented in this and other similar reports of the Commission, all that is necessary is to have a true understanding of the financial procedure followed in connection with one system and with one municipality.

The accounts of the Hydro-Electric Power Commission of Ontario are subjected to a strict audit by auditors specially appointed by the Provincial Government. The accounts of the individual municipalities are prepared according to approved and standard practice and are also duly audited. In fact, in preparing the various financial reports and statistical tables relating to all Hydro enterprises, the greatest care is exercised and all statements are presented in such form that they may be comprehensive and at the same time easily understood.

It is proposed here to explain briefly the general plan of the financial operations of the Commission and in the course of the explanation to illustrate by reference to specific data.

The balance sheet which immediately follows, exhibits the assets and liabilities of the Hydro-Electric Power Commission of Ontario in respect of all of its undertakings, except those of the "Central Ontario and Trent" and "Nipissing" systems—which, owing to special conditions, are separately submitted—and of the Ontario Power Company, Limited, the financial report of which is separately presented at the end of this section of the Report.

It will be understood that this statement of assets and liabilities and the financial tables which follow relate to the properties constructed and operated by the Commission as trustee for the municipalities; and the balance sheets, operating reports and statistical data appearing in Section X, under the heading

of "Municipal Accounts," refer to the operation of the municipalities' properties within the boundaries of those municipalities which have contracted with the Commission for their supply of electrical energy.

The whole Hydro-Electric undertaking of the municipalities, so far as finances are concerned, is operated in what may be termed two distinct divisions. The first division covers the generation, transformation, and transmission of electrical energy in wholesale quantities to municipalities. The equipment essential to this work is constructed, or otherwise provided, and also operated on behalf of the associated municipalities by the Hydro-Electric Power Commission of Ontario.

The second division comprises the various operations involved in the local distribution by various municipal utility commissions, within their respective municipalities, of the electrical energy which they purchase from the Hydro-Electric Power Commission. The work performed by the various municipal commissions in their local distribution and sale of electrical energy is under the supervision of the Hydro-Electric Power Commission.

To convey a better understanding respecting the operations of Hydro undertakings, the financial results of the two divisions just mentioned have been combined and are shown in balance sheet form immediately following statement "A" in Section X of this Report. These balance sheets are headed: "Statement combining the Hydro-Electric Power Commission's plant and reserves with the assets, liabilities and reserves of the 'Hydro' Municipal Utilities as at 31st December, 1923," and information respecting the several columns of figures is given in a statement immediately preceding these balance sheets.

The ultimate source of all revenue—whether for the larger operations of the Hydro-Electric Power Commission or for the smaller local operations of the municipalities—is, of course, the consumer. The revenue collected from the service supplied by the municipalities is divided so as to pay for the power purchased from the Commission and also for the expense incurred by the local utility in supplying its customers.

The portion of the total revenue remitted to the Hydro-Electric Power Commission—and this remittance appears in the financial statements as the total "Cost of Power"—must be sufficient to pay the municipality's proportion of the expenditures made by the Commission on behalf of the municipality, in connection with the particular system to which the municipality belongs, in order to provide, transmit and sell to the municipality the agreed-upon amount of power. This remittance to the Commission includes a sinking fund and a depreciation or renewals reserve fund; the former making full provision for the liquidation of the capital investment, and the latter creating a fund considered to be fully adequate to renew or rebuild any section of the various properties when necessary. The Hydro-Electric Power Commission of Ontario obtains its revenue from power service—that is, from the sale of electricity generated for and transmitted to the municipalities in bulk—and with this revenue operates and maintains its system and also creates the reserves just mentioned. Power service is given to each municipality "at cost."

All municipalities have current expenses to meet similar to the expenses of the Commission and have adopted the same sound financial procedure with respect to the operation of their local utilities. In other words, concurrently with the creation of funds to liquidate their debt to the Commission and provide



a reserve to rebuild generating, transforming, and transmission systems, the municipalities are taking similar action with respect to their local Hydro systems.

From the foregoing explanation it will be seen that the revenue obtained from "Hydro" light and power customers is sufficient to meet *all* operating and maintenance costs and capital charges in connection with (a) individual municipal investments and (b) collective municipal investments made through the agency of the Hydro-Electric Power Commission, and in addition there is being provided a fund for the purpose of renewing or rebuilding the properties—if necessary—of the whole Hydro installation from the generating stations to and including the municipal systems.

It will be profitable to consider, very briefly, the basic principle upon which the whole Hydro project is founded. This is set out in the contracts under which the municipalities enter into the partnership of which the Commission acts as trustee. The rates at which power is supplied to the various municipalities vary with the amount of power used and the distance from the source of supply. The entire capital cost of the various power developments and transmission systems are pro-rated annually to the connected municipalities, according to the relative use made of the lines and equipment. Each municipality is required to assume responsibility for just that portion of capital employed in delivering electrical energy to it, together with such expenses as are incident to that particular portion of the investment. Municipalities are not charged with expenses connected with equipment or plant from which they derive no benefit or are in no way interested. The entire annual expense of operation, maintenance, administration, interest and sinking fund and full depreciation are paid out of revenue collected from the municipalities, through the medium of thirteen power bills rendered by the Commission each year. Power bills are rendered at an interim estimated rate each month during the year and a thirteenth bill—or credit memorandum as the case may be—is rendered at the end of the year, when the Commission's books are closed and the actual cost determined.\* There is no burden on the taxpayers or on non-users and no avenue through which losses, should they occur, could be absorbed, except by a direct charge to the contracting municipalities for power supplied. It should be noted that the sinking fund on the debentures is treated as an operating expense and that, therefore, the municipalities are not only paying the interest on the investment, but are also paying off the principal by means of a sinking fund and, in addition, are providing for the perpetuity of the system through an adequate depreciation fund.

The results obtained by the annual adjustments of the Commission's capital investment, operating expenses and fixed charges as they affect individual municipalities are clearly shown in the tables for the respective systems.

These financial statements are typical of others appearing in this section of the Commission's Annual Report, and if their significance is fully appreciated there can be no misconception of the relationship of the municipalities to the Commission's operations.

To illustrate further the foregoing explanatory comments a typical Operating Report is now submitted, viz., that of the Hydro-Electric Utility of the town of Wallaceburg:

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\*The financial year for the Commission accounts ends on October 31. The financial year for the Municipal accounts, however, ends on December 31, and the Municipal accounts are made up to this date, and so recorded in Section X.



## WALLACEBURG HYDRO SYSTEM

### OPERATING STATEMENT FOR THE YEAR 1923

#### REVENUE

Revenue from Wallaceburg Hydro customers for year . . . . . \$60,094.93

#### EXPENSES

*Representative illustration of expenses incurred by Hydro-Electric Power Commission on behalf of a municipality in connection with the supplying of its electrical energy. These data really show—as determined by annual adjustment—what it costs the Commission to supply the municipality with its power. See Annual Adjustment Statement, page 226, for the town of Wallaceburg, as follows:*

Cost (pro share) of generating and transforming at Niagara Falls, Ontario . . . . .	\$13,285.70
Cost (pro share) of administering, maintaining and operating Commission's transformer stations and transmission lines . . .	5,946.12
Interest on Wallaceburg's proportionate share of capital investment in stations and lines . . . . .	6,849.38
Renewal reserves (pro share) yearly provision for plant renewal purposes . . . . .	1,561.04
Contingencies (pro share) yearly provision . . .	1,843.40
Payments to sinking fund (pro share) . . . . .	2,387.06
	\$31,872.70

*Expenses incurred by a municipality through its Utility Commission in connection with the sale of electrical energy to consumers. Consult the section dealing with the Municipal Accounts:*

Operation, maintenance and administrative expenses, etc. . . . .	\$11,210.08
Interest and fixed charges on debenture debt. . .	2,681.20
Depreciation charge . . . . .	1,890.00
	\$15,781.28
Total expenses charged against the revenue from customers of the Wallaceburg system . . . . .	\$47,653.98
Net surplus for the year . . . . .	\$12,440.95

The town of Wallaceburg, situated near the extreme end of the Niagara system, 212 miles distant from the source of power, Niagara Falls, Ontario, was connected to the system in February, 1915. This utility has fulfilled every monetary obligation imposed upon it by the Power Commission Act. With the close of the eighth year of operation its financial condition as set forth in the municipality's balance sheet (See Statement A, in Section X) stands as follows:

Total assets, \$163,248.30; total liabilities, \$69,989.10; reserves and surplus, \$93,259.20. The last mentioned figure comprises the following items:

Debentures paid.....	\$8,207.83
Reserve for renewals of plant (local).....	15,979.15
Sinking fund equity in Hydro-Electric Power Com- mission system.....	12,227.46
Surplus.....	56,844.76
	<hr/>
	<u>\$93,259.20</u>

In addition to these reserves the Hydro-Electric Power Commission of Ontario has collected from this utility during the period under review the sum of \$25,776.78, which represents Wallaceburg's proportionate share of renewals reserve retained by the Commission for purposes as hereinbefore mentioned.

## HYDRO-ELECTRIC POWER

## Detailed Statement of Assets

## POWER

ASSETS		
Niagara System:		
Right-of-way .....		\$1,797,932.85
Steel-tower lines .....		6,187,512.32
Transformer stations .....		13,252,392.92
Wood-pole lines .....		2,987,013.54
		<hr/>
		\$24,224,851.63
Rural power districts construction .....	\$734,951.95	
Rural line construction .....	266,839.55	
Local distributing systems .....	79,833.43	
	<hr/>	1,081,624.93
		<hr/>
		\$25,306,476.56
Niagara Power Development Works:		
Expenditure to date on construction work at Niagara Falls .....		69,397,063.18
Sewern System:		
Power development .....		\$653,945.81
Wood-pole lines .....		576,626.23
Transformer stations .....		217,463.16
		<hr/>
		\$1,448,035.20
Rural power districts construction .....		30,511.42
		<hr/>
		1,478,546.62
Eugenia System:		
Power development .....		\$1,016,043.14
Wood-pole lines .....		859,274.68
Transformer stations .....		300,827.46
		<hr/>
		\$2,176,145.28
Rural lines .....		3,241.66
Rural power districts construction .....		2,946.95
		<hr/>
		2,182,333.89
Wasdells System:		
Power development .....		\$147,335.28
Wood-pole lines .....		203,593.93
Transformer stations .....		34,920.30
		<hr/>
		\$385,849.51
Rural lines .....		14,990.82
Rural power districts construction .....		18,578.02
		<hr/>
		419,418.35
Muskoka System:		
Power development .....		\$150,037.97
Wood-pole lines .....		55,188.60
Transformer stations .....		9,896.85
		<hr/>
		215,123.42
St. Lawrence System:		
Wood-pole lines .....		\$520,228.06
Transformer stations .....		492,388.18
		<hr/>
		\$1,012,616.24
Rural power districts construction .....		33,008.26
		<hr/>
		1,045,624.50
Rideau System:		
Power development .....		\$760,597.47
Wood-pole lines .....		261,682.64
Transformer stations .....		60,799.10
		<hr/>
		1,083,079.21
Thunder Bay System:		
Power development .....		\$6,070,237.18
Transmission lines .....		620,946.99
Transformer station .....		173,041.45
		<hr/>
		6,864,225.62
Ottawa System:		
Meters, etc. ....		\$2,875.14
Rural power districts construction .....		23,164.95
		<hr/>
		26,040.09



## COMMISSION OF ONTARIO

and Liabilities, October 31, 1923

## UNDERTAKINGS

## LIABILITIES

Provincial Treasurer:			
Cash advances for Niagara and other systems.....	\$48,833,811.91		
Cash advances for Niagara Power Development Works..	65,822,145.52		
			\$114,655,957.43
Unexpended portion of the sum appropriated by the Legislature to cover expenditures by the Commission on account of the Province.....			75,967.81
Bank of Montreal:			
Cash advances re construction of third pipe line on Ontario Power Company's property.....			1,200,000.00
Debentures issued to cover purchase of capital stock of Ontario Power Company of Niagara Falls.....	\$8,000,000.00		
Interest accrued thereon.....	80,000.00		
			8,080,000.00
Debentures issued to cover the purchase price of the capital stock of The Toronto Power Company, Limited.....	\$413,200.00		
Debentures issued to cover purchase price of certain electrical power equipment of the Toronto and York Radial Railway transferred to Niagara system.....	205,800.00		
		\$619,000.00	
Interest accrued thereon.....		15,475.00	
			634,475.00
Debentures issued for the purpose of retiring the 1921 issue of the Ontario Power Company of Niagara Falls.....	\$3,200,000.00		
Interest accrued thereon.....	67,856.16		
			3,267,856.16
Debentures issued to cover purchase price of Essex system...	\$226,000.00		
Interest accrued thereon.....	3,875.01		
			229,875.01
Debentures issued to cover purchase price of Thorold system...	\$100,000.00		
Interest accrued thereon.....	1,666.67		
			101,666.67
Debentures assumed:			
Line to brick companies at Streetsville.....	\$3,999.17		
Muskoka power development.....	38,904.36		
		\$42,903.53	
Interest accrued thereon.....		1,534.49	
			44,438.02
Accounts payable.....	\$138,512.37		
Bond interest coupons overdue, but not presented.....	75,431.50		
			213,943.87
Central Ontario system—Current account.....			871.85
Insurance Department:			
Outstanding claims and awards.....	\$616,509.05		
Surplus.....	50,735.70		
			667,244.75

**HYDRO-ELECTRIC POWER**  
**Detailed Statement of Assets**  
**POWER UNDER**

ASSETS		
Bonnechere River Storage System:		
Round Lake dam.....	\$20,292.68	
Golden Lake dam.....	11,092.81	
Interest on above to December 31, 1916.....	2,780.25	
		34,165.74
Essex System:		
Purchase price of system.....	\$226,000.00	
Additional expenditure to date.....	71,748.01	
		297,748.01
Thorold System:		
Purchase price of system.....	\$100,000.00	
Less: Credit balance on current account.....	90,207.85	
		9,792.15
Service Buildings:		
Service building and equipment, Toronto.....	\$471,954.40	
Equipment of storehouse and garage, Hamilton.....	9,616.81	
Pole yard and equipment, Cobourg.....	20,245.79	
		501,817.00
Office Buildings:		
On University avenue, Toronto.....	\$500,101.84	
On corner Elm street and Centre avenue, Toronto.....	163,198.40	
		663,300.24
Office Furniture and Equipment:		
At Toronto office.....	\$96,881.79	
At Hamilton office.....	2,486.54	
At Electrical Inspection office.....	5,300.26	
Library.....	1,922.72	
Stationery and office supplies.....	17,244.02	
		123,835.33
Automobiles and Trucks.....		15,979.05
Inventories:		
Construction and maintenance, tools and equipment....	\$273,142.75	
Construction material and sundry supplies.....	692,826.86	
Maintenance material and supplies.....	226,136.10	
		1,192,105.71
Investment in capital stock of Ontario Power Company of Niagara Falls.....		8,000,000.00
Ontario Power Company of Niagara Falls:		
Re 6 per cent. 1941 debentures issued by the Commission for the purpose of retiring the 1921 issue of the Power Company.....	\$3,200,000.00	
Interest accrued thereon.....	67,856.16	
		\$3,267,856.16
Expenditure in connection with construction of third pipe line.....	3,516,524.29	
Accrued interest on \$8,000,000 bonds issued by the Commission to cover the purchase price of the capital stock of the Power Company.....	80,000.00	
Current account.....	76,057.98	
		6,940,438.43
Investment in capital stock of Toronto Power Company, Ltd.....		413,200.00
The Toronto Power Company, Ltd., Current account.....		355,497.83
Investments of Sinking Funds:		
In Securities of the Province of Ontario—		
Deposited with Provincial Treasurer—par value.....	\$2,440,000.00	
Deposited with Canada Trust Company—par value.....	30,500.00	
In the hands of the Commission—par value.....	1,155,500.00	
Interest accrued thereon.....	65,584.98	
		\$3,691,584.98
On behalf of the Essex System—par value.....	\$36,000.00	
Interest accrued thereon.....	825.00	
		36,825.00

## COMMISSION OF ONTARIO

## and Liabilities—Continued

## TAKINGS—Continued

## LIABILITIES

Balances due to municipalities in respect of amounts paid by them to October 31, 1923, in excess of the cost of power supplied to them as provided to be paid under Section 23 of the Act:

Niagara system.....	\$324,322.63
Severn system.....	57,700.88
Eugenia system.....	6,425.89
Wasdells system.....	5,080.49
St. Lawrence system.....	16,523.13
Rideau system.....	114.65
Ottawa system.....	1,607.79

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\$411,775.46

## Reserves for Sinking Fund:

## Municipalities—

Niagara system.....	\$3,184,758.95
Niagara rural lines.....	41,812.64
Severn system.....	108,881.70
Eugenia system.....	66,902.09
Eugenia rural lines.....	256.21
Wasdells system.....	22,275.82
Wasdells rural lines.....	1,185.91
Muskoka system.....	8,682.51
St. Lawrence system.....	44,283.34
Ottawa system.....	814.66
Bonnechere storage system.....	4,709.45

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\$3,484,563.28

## Service and Office Buildings—

Service buildings.....	\$63,816.73
Office buildings.....	82,011.65

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3,630,391.66

## Reserves for Renewals:

## Contributed by Municipalities—

Niagara system.....	\$2,784,442.46
Severn system.....	158,681.44
Eugenia system.....	169,355.53
Wasdells system.....	42,479.05
Muskoka system.....	18,485.66
St. Lawrence system.....	87,795.35
Rideau system.....	45,410.37
Ottawa system.....	1,216.69

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\$3,307,866.55

## In respect of Service and Office Buildings—

Service buildings.....	\$135,984.92
Office buildings.....	15,030.69

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3,458,882.16



## HYDRO-ELECTRIC POWER

## Detailed Statement of Assets

## POWER UNDER

## ASSETS

Investments of sinking funds (continued) :			
On behalf of the Thorold System—			
par value.....	\$92,000.00		
Interest accrued thereon.....	2,108.33		
		94,108.33	
Investment of Insurance Funds:			
In securities of the Dominion of Canada—			
par value.....	\$650,000.00		
Interest accrued thereon.....	5,166.67		
		655,166.67	
Investment of Reserve Funds:			
In securities of the Province of Ontario—			
par value.....	\$74,000.00		
In securities of the Dominion of Canada—			
par value.....	1,450,000.00		
Interest accrued thereon.....	39,725.65		
		1,563,725.65	
			\$6,041,410.63
Cash:			
In banks.....	\$275,371.68		
In hands of employees as advances on account of expenses	137,570.37		
In bank to pay bond interest coupons overdue, but not presented.....	75,431.50		
			\$488,373.55
Accounts Receivable:			
Due by municipalities in respect of construction work and supply sales.....	\$464,454.42		
Less: Reserve for doubtful accounts.....	9,683.73		
		\$454,770.69	
Due by municipalities in respect of Power accounts.....		1,372,626.62	
“Sinking fund and interest” and “Consumers” accounts owing in respect of Rural lines.....		95,393.41	
Due by town of Renfrew for water from Bonnechere storage system for power purposes.....		8,372.53	
			1,931,163.25
Balances due by municipalities in respect of the costs of power supplied to them, as provided to be paid under Section 23 of the Act:			
Niagara system.....	\$142,369.79		
Seyvern system.....	15,659.36		
Eugenia system.....	37,497.37		
Wasdells system.....	3,637.59		
Muskoka system.....	3,930.53		
St. Lawrence system.....	11,332.13		
Rideau system.....	5,221.09		
			219,647.86
Amount recoverable out of future revenues from the city of Port Arthur and other power customers on the Thunder Bay system—being that portion of the Nipigon Development interest deferred as at October 31, 1923.....			620,818.33
Receivable from the Province of Ontario in respect of bonus to primary rural lines.....			519.31
Walkerton Quarry mortgage.....	\$249,653.30		
Interest accrued thereon.....	10,162.71		
			259,816.01
Work in progress:			
Expenditure on account of various systems chargeable upon completion to—			
Capital construction.....	\$75,643.07		
Operating and maintenance expenses.....	30,334.46		
			105,977.53
Premiums (less discounts) on investments—to be written off.....			60,536.31
Balance on interest account to be charged against operation in the following year.....			56,529.61
Insurance unexpired.....			39,559.72

COMMISSION OF ONTARIO

and Liabilities—Continued

TAKINGS—Continued

		LIABILITIES	
Reserves for Contingencies:			
Niagara system.....		\$137,611.46	
Severn system.....		51,711.10	
Eugenia system.....		20,161.30	
Wasdells system.....		6,342.45	
Muskoka system.....		5,623.50	
St. Lawrence system.....		22,868.03	
Rideau system.....		11,657.07	
			\$255,974.91
Surplus arising from Departmental operations in Service Buildings.....			1,456.28

## HYDRO-ELECTRIC POWER

### Detailed Statement of Assets

## RADIAL RAILWAY

## ASSETS

Sandwich, Windsor and Amherstburg Railway:			
Cost of capital stock and plant assets of Company.....		\$2,039,000.00	
Advances for construction and extensions and operations.....	\$1,361,000.00		
Less: Current account.....	49,964.94		
		<u>\$1,311,035.06</u>	
			\$3,350,035.06
Guelph Radial Railway:			
Purchase price of railway.....	\$150,000.00		
Less: Instalments paid.....	10,239.17		
		<u>\$139,760.83</u>	
Proceeds of sale of bonds.....	\$150,000.00		
Proceeds of loan from Bank of Montreal	140,000.00		
		<u>\$290,000.00</u>	
Less: Current account.....	5,559.42		
		<u>284,440.58</u>	
			424,201.41
York Radial Railways:			
Purchase price of road and equipment of the Metropolitan, Scarboro and Mimico divisions.....		\$2,375,000.00	
Proceeds of loan from Bank of Montreal.....		600,000.00	
		<u>\$2,975,000.00</u>	
Less: Current account.....		14,590.81	
		<u></u>	2,960,409.19
Port Credit to St. Catharines Radial Railway:			
Expended upon purchase of right-of-way.....		\$71,388.11	
Construction materials purchased.....		135,621.95	
Surveying, engineering, administrative expenses and interest.....		154,670.38	
		<u></u>	361,680.44
Toronto to Port Credit Radial Railway:			
Expended upon purchase of right-of-way.....		\$629,729.09	
Surveying, engineering, administrative expenses and interest.....		204,569.64	
		<u></u>	834,298.73
			<u>\$144,320,787.87</u>



## COMMISSION OF ONTARIO

## and Liabilities—Continued

## UNDERTAKINGS

## LIABILITIES

In respect of the Sandwich, Windsor and Amherstburg Railway:

Debentures issued to cover purchase price of capital stock, and plant assets.....	\$2,100,000.00
Interest accrued thereon.....	7,875.00

\$2,107,875.00

Debentures issued for the purpose of making extensions and betterments.....	\$900,000.00
Interest accrued thereon.....	18,000.00

918,000.00

Bank of Montreal—Advances.....	400,000.00
(Secured by hypothecation of \$574,728.00 Hydro Radial debentures issued by Commission.)	

In respect of the Guelph Radial Railway:

City of Guelph—Purchase price of Railway payable thereto, in half-yearly instalments, according to purchase agreement.....	\$150,000.00
Less: Instalments paid.....	10,239.17

\$139,760.83

Debentures issued by the Commission for the purpose of making extensions and betterments.....	150,000.00
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Bank of Montreal—Advances.....	140,000.00
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(Secured by hypothecation of \$150,000.00 Guelph Radial Railway debentures issued by the Commission.)	
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429,760.83

In respect of York Radial Railways:

Debentures issued to cover the purchase price of the road and equipment on the Metropolitan, Scarboro and Mimico divisions.....	\$2,375,000.00
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Interest accrued thereon.....	59,375.00
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Bank of Montreal—Advances.....	600,000.00
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(Secured by hypothecation of \$600,000 interim City of Toronto debentures and \$600,000 Hydro Radial debentures issued by the Commission.)	
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3,034,375.00

In respect of the Port Credit to St. Catharines Radial Railway:

Bank of Montreal—Advances.....	500,000.00
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(Secured by hypothecation of \$1,200,000.00 Hydro Radial debentures, being part of issue of \$11,360,363.00 guaranteed by Province of Ontario.)	
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\$144,320,787.87

## NIAGARA

## Operating Account for Year

## COSTS OF OPERATION AS PROVIDED FOR UNDER SECTIONS 6 C AND 23 OF THE ACT

Power purchased.....		\$5,130,946.50
Costs of operating and maintaining transmission lines, stations, etc., including the proportion of administrative expenses chargeable to the operation of this system.....		1,458,587.22
Interest on capital investment.....		1,195,505.63
Provision for renewal of lines, stations, etc.....		275,412.93
Provision for contingencies:		
By charges against municipalities.....	\$600,356.40	
By charges against contracts with private companies which purchased power.....	109,504.20	
		<u>709,860.60</u>
Provision for sinking fund:		
By charges against municipalities.....	\$298,240.43	
By charges against contracts with private companies which purchased power.....	56,968.54	
		<u>355,208.97</u>
		<u><u>\$9,125,521.85</u></u>

## SYSTEM

Ending October 31, 1923

## REVENUE FOR PERIOD

Collected from municipalities.....		\$8,059,354.89.
Power sold to private companies.....		1,235,321.34
		<u>\$9,294,676.23</u>
Add: amounts due by certain municipalities, being the difference between sums paid and the costs of power supplied to them in the year.....	\$40,239.56	
Deduct: amounts collected from certain municipalities in excess of the sums required to be paid by them for power supplied in the year.....	331,174.99	
		<u>290,935.43</u>
REVENUE.....		\$9,003,740.80
Loss on sale of power supplied to private companies (written off to contingency reserve).....		121,781.05
		<u><u>\$9,125,521.85</u></u>



## NIAGARA

Statement showing the amount to be paid by each Municipality as the Cost, under  
by the Commission from each Municipality on account of such cost, and  
ascertainment (by annual adjustment) of the actual cost

Municipality	Interim rates per horsepower collected by Commission during year		Share of capital cost of system on which interest and fixed charges are payable	Average horse- power supplied in year after correction for power factor	Cost of power to Com- mission	Share of operating	
	To Dec. 31, 1922	To Oct. 31, 1923				Operating, mainten- ance and adminis- trative expenses	Interest
	\$ c.	\$ c.	\$ c.		\$ c.	\$ c.	\$ c.
Acton.....	37.00	37.00	44,298.68	341.2	4,918.17	1,757.05	2,365.27
Agincourt...	51.00	51.00	2,216.73	27.6	720.89	46.73	116.48
Ailsa Craig..	49.00	49.00	32,976.26	110.0	1,585.58	825.84	1,789.85
Alvinston....	95.95	95.95	41,470.85	69.2	997.47	867.94	2,263.14
Aylmer.....	50.00	50.00	50,791.13	228.8	3,298.00	2,258.29	2,868.26
Ayr.....	50.00	50.00	13,305.09	84.9	1,223.78	695.73	715.85
Baden.....	36.00	36.00	29,394.29	219.0	3,156.74	1,445.83	1,543.39
Beachville...	37.00	37.00	40,912.72	344.7	4,968.62	2,533.62	1,961.63
Belle River..	92.00	92.00	14,743.55	45.7	658.74	443.96	751.17
Blenheim....	54.00	50.00	36,645.05	174.5	2,515.30	1,759.23	1,981.10
Bolton.....	60.00	60.00	40,341.90	135.0	1,945.94	583.14	2,194.47
Bothwell....	55.00	55.00	32,010.21	146.0	2,104.49	1,084.98	1,731.63
Brampton...	26.00	28.00	122,202.33	1,215.3	17,517.75	5,972.78	6,519.78
Brantford...	25.00	25.00	399,022.88	6,380.1	91,964.96	19,608.07	20,841.52
Brigden.....	66.00	70.00	27,048.13	50.0	720.72	853.20	1,475.23
Burford.....	70.00	60.00	17,266.17	61.7	889.37	729.37	936.80
Burgessville..	52.00	58.00	7,696.72	32.8	472.79	428.95	395.69
Caledonia...	29.00	29.00	10,992.07	113.1	1,630.26	317.18	491.56
Chatham.....	31.00	31.00	307,153.66	3,181.9	45,865.00	11,715.70	16,322.45
Chippawa....	32.00	25.00	4,085.67	78.5	1,131.53	818.29	172.83
Clinton.....	48.00	50.00	57,076.89	266.9	3,847.19	2,822.49	3,076.42
Comber.....	60.00	50.00	27,515.55	115.0	1,657.65	875.27	1,490.21
Dashwood....	62.00	62.00	19,468.45	47.5	684.68	597.21	1,058.35
Delaware....	85.00	75.00	4,174.01	16.6	239.28	182.19	226.08
Dereham Tp..	37.00	37.00	11,605.75	73.4	1,058.01	1,093.18	619.10
Dorchester...	50.00	50.00	5,031.34	29.8	429.55	387.16	270.85
Drayton.....	72.00	70.00	27,039.58	55.9	805.76	956.20	1,471.75
Dresden.....	38.00	38.00	27,484.34	202.8	2,923.23	1,330.66	1,474.02
Drumbo.....	55.00	50.00	5,209.17	28.3	407.93	294.10	281.07
Dublin.....	70.00	70.00	10,216.38	29.8	429.55	813.97	554.31
Dundas.....	22.00	23.00	61,501.40	1,145.6	16,513.07	2,180.40	2,930.96
Dunnville...	50.00	42.00	82,316.62	348.1	5,017.63	1,144.65	4,513.79
Dutton.....	44.00	44.00	19,681.10	130.0	1,873.86	1,486.35	1,058.02
Elmira.....	38.00	38.00	64,444.27	481.6	6,941.95	2,316.82	3,384.18
Elora.....	44.00	40.00	44,974.14	280.4	4,041.78	1,699.48	2,394.82
Embro.....	80.00	70.00	18,696.02	49.5	713.51	860.63	1,013.64
Etobicoke Tp	27.00	30.00	63,327.28	752.0	10,839.59	2,595.95	3,349.30
Exeter.....	46.00	55.00	55,372.29	235.0	3,387.37	1,476.86	2,990.38
Fergus.....	47.00	40.00	44,607.09	274.0	3,949.53	1,800.65	2,378.06
Ford City....	46.42	40.00	150,682.52	1,217.6	17,550.91	12,648.84	7,845.50
Forest.....	60.00	55.00	35,248.21	117.8	1,698.01	1,210.44	1,913.88
Galt.....	25.00	28.00	339,420.65	4,318.6	62,249.79	16,518.01	17,620.35
Georgetown..	38.00	38.00	114,076.15	655.1	9,442.84	3,872.62	5,911.48
Glencoe.....	76.00	70.00	37,236.07	80.4	1,158.91	898.17	2,029.00
Goderich....	55.00	57.00	155,293.09	562.4	8,106.63	6,435.56	8,403.68
Grantham Tp	17.00	17.00	28,262.87	61.2	1,363.15	335.38	1,414.47
Granton.....	55.00	55.00	14,774.64	50.3	725.04	603.82	801.74
Guelph.....	25.00	27.00	342,248.14	5,268.4	75,940.53	19,733.61	17,777.47
Hagersville..	36.00	32.00	63,077.31	480.5	6,926.09	1,991.08	3,274.13
Hamilton....	20.00	24.00	1,620,332.99	21,283.9	306,793.46	51,829.16	72,046.46

## SYSTEM

## COST OF POWER

Section 23 of the Act, of Power supplied to it by the Commission, the amount received the amount remaining to be credited or charged to each Municipality upon of power supplied to it in the year ending October 31, 1923

costs and fixed charges.			Total cost of power for year as provided to be paid under section 23 of Act	Amounts paid to the Commission by each municipality	Amounts remaining to be credited or charged to each municipality upon ascertainment of the actual cost of power by annual adjustment		Sinking fund for the years mentioned hereunder charged as part of the cost of power in the year 1922-23
Renewals	Contingencies	Sinking fund			Credited	Charged	
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	
539.07	682.40	588.57	10,850.53	12,623.91	1,773.38		1921-22
26.55	55.20		965.85	1,410.14	444.29		
407.92	220.00	484.52	5,313.71	5,391.81	78.10		1918-19
515.79	138.40		4,782.74	6,636.73	1,853.99		
653.70	457.60		9,535.85	11,439.13	1,903.28		
163.15	169.80	246.31	3,214.62	4,243.71	1,029.09		1919-20
351.75	438.00	458.12	7,393.83	7,883.22	489.39		1921-22
447.07	689.40	506.77	11,107.11	12,753.68	1,646.57		1921-22
171.19	91.40		2,116.46	4,200.54	2,084.08		
451.51	349.00	720.83	7,776.97	8,851.64	1,074.67		1918-19
500.14	270.00	651.74	6,145.43	8,101.90	1,956.47		1918-19
394.66	292.00	810.70	6,418.46	8,031.94	1,613.48		1918-19
1,485.92	2,430.60	2,139.73	36,066.56	35,283.43		783.13	1922-23
4,749.98	12,760.20	4,120.29	154,045.02	159,501.62	5,456.60		1919-20
336.22	100.00	401.72	3,887.09	3,462.28		424.81	1917-18
213.50	123.40	284.77	3,177.21	3,815.33	638.12		1918-19
90.18	65.60	117.42	1,570.63	1,869.41	298.78		1917-18
112.03	226.20	132.57	2,909.80	3,281.09	371.29		1921-22
3,720.04	6,363.80	3,635.15	87,622.14	98,920.19	11,298.05		1918-19
39.39	157.00	56.72	2,375.76	2,054.02		321.74	
701.15	533.80	818.98	11,800.03	12,872.78	1,072.75		1919-20
339.63	230.00	302.35	4,895.11	5,908.87	1,013.76		1918-19
241.21	95.00	188.70	2,865.15	2,945.48	80.33		1916-17
51.53	33.20	78.66	810.94	1,276.45	465.51		1918-19
141.10	146.80		3,058.19	2,563.14		495.05	
61.73	59.60	86.96	1,295.85	1,489.11	193.26		1919-20
335.42	111.80		3,680.93	3,933.60	252.67		
335.94	405.60	553.32	7,022.77	7,705.48	682.71		1918-19
64.06	56.60	63.06	1,166.82	1,446.73	279.91		1919-20
126.33	59.60	13.44	1,997.20	2,088.31	91.11		1916-17
668.00	2,291.20	961.91	25,545.54	27,511.78	1,966.24		1922-23
1,028.73	696.20		12,401.00	15,152.03	2,751.03		
241.14	260.00	400.66	5,320.03	5,718.99	398.96		1918-19
771.29	963.20	810.82	15,188.26	18,301.36	3,113.10		1920-21
545.80	560.80	704.57	9,947.25	11,415.44	1,468.19		1919-20
231.02	99.00	324.50	3,242.30	3,520.49	278.19		1919-20
763.33	1,504.00	34.81	19,086.98	22,201.45	3,114.47		1916-17
681.53	470.00	790.15	9,796.29	12,585.04	2,788.75		1917-18
541.98	548.00	581.84	9,800.06	11,350.97	1,550.91		1919-20
1,788.06	2,435.20	2,574.80	44,843.31	49,862.06	5,018.75		1922-23
436.19	235.60	581.52	6,075.64	6,584.45	508.81		1916-17
4,015.84	8,637.20	5,782.82	114,824.01	122,317.71	7,493.70		1922-23
1,347.28	1,310.20	1,765.56	23,649.98	24,895.20	1,245.22		1920-21
462.43	160.80		4,709.31	5,715.73	1,006.42		
1,915.28	1,124.80	2,608.50	28,594.45	30,943.41	2,348.96		1919-20
	122.40	509.21	3,744.61	2,997.07		747.54	1922-23
182.72	100.60	241.56	2,655.48	2,763.16	107.68		1917-18
4,051.65	10,536.80	5,834.38	133,874.44	140,476.96	6,602.52		1922-23
746.20	961.00	880.45	14,778.95	15,698.59	919.64		1920-21
16,420.06	42,567.80	23,644.89	513,301.83	495,070.82		18,231.01	1922-23



## NIAGARA

Statement showing the amount to be paid by each Municipality as the Cost, under by the Commission from each Municipality on account of such cost, and ascertainment (by annual adjustment) of the actual cost

Municipality	Interim rates per horsepower collected by Commission during year		Share of capital cost of system on which interest and fixed charges are payable	Average horse-power supplied in year after correction for power factor	Cost of power to Commission	Share of operating	
	To Dec. 31, 1922	To Oct. 31, 1923				Operating, maintenance and administrative expenses	Interest
	\$ c.	\$ c.	\$ c.		\$ c.	\$ c.	\$ c.
Harriston....	50.00	50.00	53,157.40	214.0	3,084.67	2,364.78	2,872.26
Hensall.....	64.00	75.00	22,618.57	56.2	810.08	522.58	1,229.41
Hespeler....	29.00	30.00	52,808.51	527.7	7,606.45	2,672.88	2,351.61
Highgate....	55.00	55.00	16,217.42	60.3	869.18	457.58	826.17
Ingersoll....	29.00	30.00	92,672.02	1,051.0	15,149.58	5,012.04	4,832.81
Kitchener...	25.00	27.00	679,572.53	8,896.9	128,242.97	28,604.23	34,484.77
Lambeth....	75.00	70.00	11,365.41	45.2	651.53	487.98	615.63
Listowel....	37.00	40.00	73,449.73	416.9	6,009.34	3,469.55	3,944.23
London.....	25.00	25.00	1,296,454.84	17,931.9	258,476.58	50,561.13	68,045.29
London Rly. Commission	15.00+ kw-hr.	15.00+ kw-hr.	139,509.81	1,042.0	15,019.75	18,021.52	7,480.45
Lucan.....	38.00	40.00	21,237.33	124.3	1,791.70	1,021.87	1,143.58
Lynden.....	50.00	45.00	24,896.54	107.9	1,555.31	601.28	1,323.83
Markham....	70.00	65.00	33,294.28	80.8	2,020.31	589.42	1,263.61
Merlin.....	73.14	60.00	26,510.53	99.2	1,429.90	1,395.28	1,297.21
Merritton...	18.00	20.00	1,556.31	335.3	4,833.13	959.44	84.42
Milton.....	32.00	32.00	116,753.15	1,033.7	14,900.11	6,026.88	6,191.57
Milverton...	35.00	35.00	54,027.38	364.0	5,246.82	2,941.34	2,889.65
Mimico.....	26.00	30.00	77,387.35	827.1	11,922.10	3,341.43	4,092.04
Mitchell....	37.00	37.00	38,045.21	269.2	3,880.34	1,857.57	2,032.27
Moorefield...	70.00	75.00	14,392.46	33.5	482.88	922.58	782.57
Mt. Brydges.	76.00	70.00	7,744.54	30.8	443.96	368.41	419.52
Newbury....	67.10	67.10	9,402.81	27.3	393.51	324.45	511.19
NewHambur	38.00	38.00	42,349.11	310.2	4,471.33	2,497.31	2,225.50
New Toronto	26.00	30.00	232,274.27	2,545.8	36,696.00	9,558.29	12,270.36
Niagara Falls	17.50	18.00	36,541.78	4,895.7	70,568.30	4,450.31	1,901.81
Niagara-on-L.	26.00	26.00	8,437.61	208.0	2,998.18	806.26	462.16
Norwich....	39.00	40.00	42,276.81	306.0	4,410.79	2,166.39	2,071.37
Oil Springs...	48.00	40.00	42,239.90	267.4	3,854.40	1,348.90	2,272.67
Otterville....	52.00	52.00	9,955.54	42.3	609.73	456.18	511.84
Palmerston..	45.00	45.00	44,125.92	226.4	3,263.41	2,413.98	2,374.40
Paris.....	26.00	28.00	70,063.64	991.8	14,296.15	4,067.92	3,680.51
Parkhill....	75.00	70.00	37,396.42	72.	1,037.83	621.01	2,038.76
Parkville....	36.00	36.00	120,530.92	763.7	11,008.23	4,819.80	6,405.78
Plattsville..	75.00	90.00	13,821.06	30.6	441.08	575.61	753.02
Point Edward	40.42	40.42	19,256.71	144.9	2,088.64	1,531.11	1,032.31
Pt. Colborne.	25.00	27.00	2,177.14	469.1	6,761.77	4,296.47	118.09
Port Credit..	28.00	35.00	20,065.49	175.2	2,525.39	1,157.06	938.84
Pt. Dalhousie	22.00	24.00	5,785.42	180.6	4,022.62	837.01	317.31
Port Dover..	62.00	60.00	22,452.30	82.8	1,193.51	955.45	1,170.27
Pt. Robinson.	14.00	20.00	8,799.01	294.9	4,250.79	1,647.21	439.96
Port Stanley.	50.00	48.00	40,105.77	205.9	2,967.91	1,848.24	2,226.47
Preston.....	27.00	27.00	150,572.66	2,020.9	29,129.95	7,098.53	7,792.44
Princeton....	90.00	75.00	9,412.36	22.2	320.00	290.19	512.62
Queenston...	18.42	20.00	1,125.37	42.6	614.05	65.33	61.60
Ridgetown...	45.00	45.00	45,282.38	249.7	3,599.26	1,693.00	2,221.48
Riverside....	52.75	45.00	33,539.72	215.8	3,110.62	2,278.52	1,653.27
Rockwood....	65.00	60.00	15,253.61	61.1	880.72	764.65	825.08
Rodney.....	50.00	48.00	13,393.36	58.6	844.68	671.56	724.92
St. Catharines	18.25	20.00	42,169.60	5,092.7	73,407.93	11,625.34	2,277.41
St. Clair B'ch	75.59	75.00	5,423.85	32.4	467.02	393.86	316.39



## SYSTEM—Continued

## COST OF POWER

Section 23 of the Act, of Power supplied to it by the Commission, the amount received the amount remaining to be credited or charged to each Municipality upon of power supplied to it in the year ending October 31, 1923

costs and fixed charges.			Total cost of power for year as provided to be paid under section 23 of Act	Amounts paid to the Commission by each municipality	Amounts remaining to be credited or charged to each municipality upon ascertainment of the actual cost of power by annual adjustment		Sinking fund for the years mentioned hereunder charged as part of the cost of power in the year 1922-23
Renewals	Contingencies	Sinking fund			Credited	Charged	
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	
654.62	428.00	690.49	10,094.82	10,697.96	603.14		1917-18
280.19	112.40	420.83	3,375.49	4,081.51	706.02		1917-18
535.95	1,055.40	771.77	14,994.06	15,988.75	994.69		1922-23
188.29	120.60	408.42	2,870.24	3,317.06	446.82		1917-18
1,101.44	2,102.00	1,586.08	29,783.95	33,395.99	3,612.04		1922-23
7,859.40	17,793.80	11,317.54	228,302.71	242,176.28	13,873.57		1922-23.
140.31	90.40	140.13	2,125.98	3,247.11	1,121.13		1918-19
898.93	833.80	881.02	16,036.87	16,430.17	393.30		1917-18
15,508.16	35,863.80	22,331.76	450,786.72	448,298.98		2,487.74	1922-23
1,704.86	2,084.00	2,612.93	46,923.51	36,423.83		10,499.68	1919-20
260.63	248.60	393.92	4,860.30	4,920.23	59.93		1918-19
301.71	215.80	469.95	4,467.88	4,914.75	446.87		1918-19
287.96	161.60		4,322.90	5,325.23	1,002.33		
295.65	198.40		4,616.44	5,597.60	981.16		
19.24	670.60	27.71	6,594.54	6,598.83	4.29		1922-23
1,411.12	2,067.40	1,372.69	31,969.77	33,078.73	1,108.96		1920-21
658.58	728.00	765.98	13,230.37	12,740.96		489.41	1917-18
932.62	1,654.20	904.24	22,846.63	24,254.60	1,407.97		1921-22
463.17	538.40	666.97	9,438.72	9,959.78	521.06		1922-23
178.36	67.00		2,433.39	2,482.92	49.53		
95.61	61.60	224.54	1,613.64	2,081.14	467.50		1918-19
116.51	54.60		1,400.26	1,833.46	433.20		
507.21	620.40	730.39	11,052.14	11,787.56	735.42		1922-23
2,796.53	5,091.60	5,573.29	71,986.07	74,748.69	2,762.62		1919-20
433.45	9,791.40	457.54	87,602.81	87,717.00	114.19		1918-19
105.33	416.00		4,787.93	5,408.69	620.76		
472.08	612.00	632.02	10,364.65	12,185.36	1,820.71		1921-22
517.96	534.80		8,528.73	11,092.92	2,564.19		
116.65	84.60	127.38	1,906.38	2,200.87	294.49		1917-18
541.15	452.80	485.19	9,530.93	10,187.23	656.30		1917-18
838.82	1,983.60	829.86	25,696.86	27,570.35	1,873.49		1919-20
464.65	144.00		4,306.25	5,099.86	793.61		
1,459.94	1,527.40	1,530.97	26,752.12	30,011.78	3,259.66		1917-18
171.62	61.20	463.56	2,466.09	2,684.99	218.90		1919-20
235.27	289.80	242.77	5,419.90	5,854.16	434.26		1917-18
26.91	938.20	38.76	12,180.20	12,492.99	312.79		1922-23
213.97	350.40	351.13	5,536.79	6,141.98	605.19		1921-22
72.32	361.20	104.14	5,714.60	4,865.43		849.17	1922-23
266.71	165.60		3,751.54	4,995.75	1,244.21		
		158.39	6,496.35	6,304.00		192.35	
507.43	411.80	723.74	8,685.59	9,916.48	1,230.89		1921-22
1,775.97	4,041.80	2,557.40	52,396.09	54,628.03	2,231.94		1922-23
116.83	44.40	139.18	1,423.22	1,731.01	307.79		1919-20
14.04	85.20		840.22	842.94	2.72		
506.30	499.40	658.47	9,177.91	11,238.04	2,060.13		1918-19
376.80	431.60	542.59	8,393.40	9,918.08	1,524.68		1922-23
188.04	122.20	270.57	3,051.26	3,510.24	458.98		1920-21
165.22	117.20	261.66	2,785.24	2,832.64	47.40		1916-17
283.41	10,185.40	743.03	98,522.52	101,777.27	3,254.75		1922-23
72.11	64.80	103.8-	1,418.07	2,429.52	1,011.50		1922-23

## NIAGARA

Statement showing the amount to be paid by each Municipality as the Cost, under by the Commission from each Municipality on account of such cost, and ascertainment (by annual adjustment) of the actual cost

Municipality	Interim rates per horsepower collected by Commission during year		Share of capital cost of system on which interest and fixed charges are payable	Average horsepower supplied in year after correction for power factor	Cost of power to Commission	Share of operating	
	To Dec. 31, 1922	To Oct. 31, 1923				Operating, maintenance and administrative expenses	Interest
	\$ c.	\$ c.	\$ c.		\$ c.	\$ c.	\$ c.
St. George...	49.00	40.00	15,543.22	74.5	1,073.87	592.18	805.67
St. Jacobs...	40.00	40.00	7,498.37	41.5	598.20	387.36	395.24
St. Marys...	35.00	35.00	91,256.71	742.8	10,706.97	6,411.51	4,870.37
St. Thomas...	30.00	30.00	271,848.79	3,328.9	47,983.91	16,369.56	14,361.46
Sarnia.....	35.00	35.00	504,767.82	3,798.2	54,748.56	21,758.41	27,059.56
Scarboro Tp.	35.00	35.00	11,725.67	510.8	13,341.75	693.93	643.11
Seaforth....	40.00	40.00	69,796.36	411.3	5,928.62	3,367.27	3,745.05
Simcoe.....	34.00	34.00	45,983.62	422.3	6,087.18	2,048.91	2,399.47
Springfield..	65.00	65.00	10,220.32	25.0	360.36	647.96	554.61
Stamford Tp.	20.00	20.00	9,918.48	610.5	8,799.96	940.10	542.28
Stouffville...		70.00	22,417.85	6.6	95.13	77.11	103.57
Stratford....	30.00	30.00	422,517.33	4,301.3	62,000.42	21,206.48	22,304.63
Strathroy....	40.00	40.00	87,003.83	496.2	7,152.40	2,058.57	4,687.18
Streetsville...			58,071.69	421.8	6,079.97	3,154.00	2,970.24
Sutton.....		70.00	5,311.79	7.8	112.43	349.14	209.43
Tavistock...	37.00	37.00	37,724.10	170.2	2,453.32	1,645.07	2,034.16
Tecumseh....	59.07	52.00	14,223.23	91.7	1,321.80	1,067.53	833.65
Thamesford..	54.00	50.00	20,722.12	93.7	1,350.62	946.20	1,120.55
Thamesville..	55.00	50.00	16,216.87	82.6	1,190.62	966.05	875.82
Thedford....	110.77	110.00	27,934.43	43.6	628.47	575.23	1,524.95
Thorold.....			2,648.43	570.6	8,224.82	1,885.54	143.66
Thorndale....	70.00	70.00	14,585.91	38.8	559.28	824.45	793.35
Tilbury.....	50.00	45.00	35,698.57	237.0	3,416.19	1,663.90	1,918.89
Tillsonburg..	37.00	45.00	66,582.81	446.2	6,431.68	2,882.77	3,545.74
Toronto.....	22.00	24.00	5,621,573.84	151,766.0	2,187,607.31	651,774.09	291,824.55
Toronto Tp..	30.00	30.00	43,683.55	408.0	5,881.06	2,639.25	2,060.69
Walkerville..	35.00	33.00	585,172.33	4,783.4	68,949.57	15,465.34	30,493.58
Wallaceburg..	35.00	35.00	127,649.48	921.7	13,285.70	5,946.12	6,849.38
Wardsville...	82.20	82.20	6,683.17	12.1	174.41	261.04	364.56
Waterdown...	36.00	36.00	19,550.73	139.2	2,006.48	1,338.90	1,018.56
Waterford...	38.00	35.00	22,955.40	196.8	2,836.74	1,354.54	1,193.86
Waterloo....	26.00	28.00	135,784.43	1,722.1	24,822.94	5,587.09	6,907.79
Ward...	85.00	70.00	27,893.10	85.7	1,235.31	939.00	1,515.71
Welland.....	20.00	23.00	86,602.28	1,952.8	27,860.04	3,070.44	4,730.36
Wellesley....	43.00	44.00	30,500.51	135.7	1,956.03	1,099.54	1,630.52
West Lorne...	45.00	40.00	35,283.49	209.8	3,024.13	2,185.21	1,900.61
Weston.....	29.00	30.00	146,181.30	1,784.2	25,718.07	5,024.65	7,777.99
Windsor.....	35.00	33.00	1,230,444.60	10,114.7	145,796.77	32,903.03	64,100.08
Woodbridge...	37.00	38.00	31,079.91	237.5	3,423.40	1,326.54	1,672.73
Woodstock...	27.00	28.00	173,131.97	2,593.0	37,376.39	10,268.30	8,879.16
Wyoming....	60.00	62.00	12,237.57	40.4	582.34	569.01	664.62
Zurich.....	74.00	74.00	26,019.05	53.6	772.61	727.13	1,416.44
Rural Power Districts—							
Aylmer.....			5,349.88	6.7	96.58	208.48	304.84
Baden.....			12,093.66	21.8	314.23	1,040.02	666.59
Beamsville...			72,018.31	72.4	1,043.60	2,845.46	2,837.84
Belle River...			28,757.87	39.6	570.81	725.70	1,262.72
Brant.....			19,939.28	38.8	1,047.20	470.04	1,096.83



## SYSTEM—Continued

## COST OF POWER

Section 23 of the Act, of Power supplied to it by the Commission, the amount received the amount remaining to be credited or charged to each Municipality upon of power supplied to it in the year ending October 31, 1923

costs and fixed charges.			Total cost of power for year as provided to be paid under section 23 of Act	Amounts paid to the Commission by each municipality	Amounts remaining to be credited or charged to each municipality upon ascertainment of the actual cost of power by annual adjustment		Sinking fund for the years mentioned hereunder charged as part of the cost of power in the year 1922-23
Renewals	Contingencies	Sinking fund			Credited	Charged	
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	
183.62	149.00	306.59	3,110.93	3,097.08	.....	13.85	1918-19
90.08	83.00	45.82	1,599.70	1,661.62	61.92	.....	1916-17
1,110.00	1,485.60	1,598.41	26,182.86	25,997.66	.....	185.20	1922-23
3,273.11	6,657.80	4,713.28	93,359.12	100,706.18	7,347.06	.....	1922-23
6,167.10	7,596.40	5,606.44	122,936.47	132,940.33	10,003.86	.....	1917-18
146.57	1,021.60	.....	15,846.96	17,877.10	2,030.14	.....	.....
853.53	822.60	1,229.09	15,946.16	16,450.47	504.31	.....	1922-23
546.86	844.60	338.52	12,265.54	14,356.98	2,091.44	.....	1918-19
126.40	50.00	20.62	1,759.95	1,443.48	.....	316.47	1916-17
123.58	2,221.00	180.13	11,807.05	12,397.57	590.52	.....	1917-18
23.58	13.20	.....	312.59	464.91	152.32	.....	.....
5,083.44	8,602.60	7,320.15	126,517.72	129,038.25	2,520.53	.....	1922-23
1,068.25	992.40	1,318.07	17,276.87	19,268.45	1,991.58	.....	1919-20
676.94	843.60	974.81	14,699.56	15,307.05	607.49	.....	1922-23
44.32	15.60	.....	730.92	547.16	.....	183.76	.....
463.60	340.40	786.42	7,722.97	6,297.36	.....	1,425.61	1917-18
190.00	183.40	273.59	3,869.97	4,865.06	995.09	.....	1922-23
255.38	187.40	368.09	4,228.24	4,755.18	526.94	.....	1919-20
199.61	165.20	292.96	3,690.26	4,201.28	511.02	.....	1918-19
347.55	87.20	.....	3,163.40	4,816.20	1,652.80	.....	.....
32.74	1,141.20	47.15	11,475.11	12,696.59	1,221.48	.....	1922-23
180.81	77.60	347.76	2,783.25	2,715.86	.....	67.39	1919-20
437.34	474.00	507.53	8,417.85	10,868.10	2,450.25	.....	1918-19
808.11	892.40	1,163.68	15,724.38	19,642.19	3,917.81	.....	1922-23
66,509.55	303,532.00	95,773.76	3,597,021.26	3,608,707.47	11,686.21	.....	1922-23
469.66	816.00	400.57	12,267.23	12,238.00	.....	29.23	1920-21
6,949.77	9,566.80	10,096.85	141,521.91	160,455.36	18,933.45	.....	1919-20
1,561.04	1,843.40	2,387.06	31,872.70	32,259.67	386.27	.....	1918-19
83.09	24.20	.....	907.30	991.88	84.58	.....	.....
232.14	278.40	334.28	5,208.76	5,012.70	.....	196.06	1922-23
272.09	393.60	310.49	6,361.32	6,997.47	636.15	.....	1918-19
1,574.35	3,444.20	2,267.06	44,603.43	48,370.22	3,766.79	.....	1922-23
345.45	171.40	139.74	4,346.61	6,256.90	1,910.29	.....	1916-17
1,045.14	3,865.60	245.12	40,816.70	43,621.79	2,805.09	.....	1916-17
371.61	271.40	544.13	5,873.23	5,947.15	73.92	.....	1917-18
433.17	419.60	188.03	8,150.75	8,558.95	408.20	.....	1917-18
1,772.68	3,568.40	2,552.66	46,414.45	53,245.27	6,830.82	.....	1922-23
14,609.01	20,229.40	9,825.60	287,463.89	341,323.84	53,859.95	.....	1919-20
381.23	475.00	457.07	7,735.97	8,985.57	1,249.60	.....	1922-23
2,023.64	5,186.00	2,914.05	66,647.54	72,193.85	5,546.31	.....	1922-23
151.47	80.80	239.91	2,288.15	2,487.46	199.31	.....	1917-18
322.82	107.20	199.40	3,545.60	3,967.52	421.92	.....	1916-17
90.33	13.40	95.78	809.41	395.17	.....	414.24	.....
206.50	43.60	207.59	2,478.53	2,297.44	.....	181.09	.....
885.35	144.80	886.89	8,643.94	10,378.65	1,734.71	.....	.....
358.30	79.20	399.97	3,396.70	5,362.65	1,965.95	.....	.....
353.51	77.60	338.78	3,383.96	4,837.27	1,453.31	.....	.....



## NIAGARA

Statement showing the amount to be paid by each Municipality as the Cost, under by the Commission from each Municipality on account of such cost, and ascertainment (by annual adjustment) of the actual cost

Rural Power Districts	Share of capital cost of system on which interest and fixed charges are payable	Average horse-power supplied in year after correction for power factor	Cost of power to Commission	Share of operating	
				Operating, maintenance and administrative expenses	Interest
	\$ c.		\$ c.	\$ c.	\$ c.
Chatham.....	32,882.22	43.8	631.35	1,482.96	1,674.32
Chippawa.....	20,724.85	55.3	797.11	2,829.87	1,153.44
Delaware.....	27,473.88	15.2	219.10	644.69	909.26
Dorchester.....	57,374.89	77.1	1,111.35	3,273.53	3,173.16
Drumbo.....	14,655.69	16.8	242.16	466.43	815.35
Dundas.....	18,053.52	30.0	432.43	653.14	1,031.29
Exeter.....	22,760.73	36.3	523.24	1,085.12	1,231.67
Galt.....	5,278.59	15.0	216.22	116.90	265.75
Homer.....	3,938.41	7.6	125.26	198.86	214.51
Ingersoll.....	712.81	2.4	34.59	26.29	40.27
Jordan.....	18,313.29	5.0	314.26	268.49	754.28
London.....	15,303.03	10.5	151.35	385.58	383.23
Lynden.....	9,402.02	10.0	144.14	228.58	532.32
Markham.....	14,977.41	18.1	472.76	469.27	795.62
Niagara.....	7,978.37	26.9	387.75	521.30	462.71
Petrolia.....	2,234.92	0.7	10.09	6.27	40.45
Preston.....	47,660.28	98.5	1,419.81	2,560.29	2,482.80
Ridgetown.....	31,285.24	28.7	413.69	867.78	1,791.75
St. Jacobs.....	7,878.54	12.9	185.95	350.00	422.60
St. Thomas.....	35,877.98	5.0	72.07	107.30	192.78
Saltfleet.....	114,932.03	177.1	2,552.78	9,841.31	6,295.00
Sandwich.....	14,798.19	25.6	369.01	567.23	560.67
Sarnia.....	15,418.47	9.2	132.61	325.55	250.90
Simcoe.....	5,423.85	10.3	148.47	155.76	282.71
Stamford.....	11,773.32	29.0	418.02	1,612.49	651.19
Streetsville.....	1,194.51	0.3	4.32	10.30	64.93
Tavistock.....	8,443.09	8.7	125.40	278.89	323.41
Wallaceburg.....	18,656.54	12.6	181.62	362.31	425.89
Waterdown.....	5,437.68	7.4	106.67	181.12	301.48
Welland.....	4,459.35	8.0	115.31	215.05	255.63
Woodbridge.....	3,461.27	.....	592.57	35.57	150.47
Woodstock.....	67,205.02	96.3	1,388.10	2,599.26	3,712.68
Totals—Municipalities.....	19,859,574.28	300,473.1	4,341,730.88	1,272,212.14	1,020,577.47
Totals—Companies.....	3,264,092.89	54,752.1	789,215.62	186,375.08	174,928.16
Grand Totals.....	23,123,667.17	355,225.2	5,130,946.50	1,458,587.22	1,195,505.63
Non-operating capital.....	1,924,957.24				
	25,048,624.41				

## SYSTEM—Continued

## COST OF POWER

Section 23 of the Act, of Power supplied to it by the Commission, the amount received the amount remaining to be credited or charged to each Municipality upon of power supplied to it in the year ending October 31, 1923

costs and fixed charges.			Total cost of power for year as provided to be paid under section 23 of Act	Amounts paid to the Commission by each municipality	Amounts remaining to be credited or charged to each municipality upon ascertainment of the actual cost of power by annual adjustment		Sinking fund for the years mentioned hereunder charged as part of the cost of power in the year 1922-23
Renewals	Contingencies	Sinking fund			Credited	Charged	
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	
540.41	87.60	516.98	4,933.62	7,037.63	2,104.01		
374.77	110.60	355.64	5,621.43	4,436.48		1,184.95	
285.44	30.40	282.40	2,371.29	3,461.82	1,090.53		
1,004.42	154.20	983.82	9,700.48	13,060.88	3,360.40		
242.58	33.60	255.97	2,056.09	3,086.86	1,030.77		
341.43	60.00	316.66	2,834.95	2,438.07		396.88	
366.46	72.60	386.66	3,665.75	5,492.10	1,826.35		
83.35	30.00	82.55	794.77	1,071.60	276.83		
72.49	15.20	65.91	692.23	1,103.25	411.02		
12.44	4.80	12.55	130.94	95.92		35.02	
253.70	10.00	230.80	1,831.53	2,062.99	231.46		
125.06	21.00	118.05	1,184.27	1,803.39	619.12		
166.96	20.00	165.36	1,257.36	1,757.02	499.66		
260.31	36.20	244.95	2,279.11	4,284.47	2,005.36		
152.26	53.80	142.27	1,720.09	3,318.25	1,598.16		
12.55	1.40	12.59	83.35	128.01	44.66		
767.93	197.00	773.46	8,201.29	10,481.55	2,280.26		
578.29	57.40	553.24	4,262.15	7,321.26	3,059.11		
129.71	25.80	131.86	1,245.92	1,846.41	600.49		
58.48	10.00	60.29	500.92	412.74		88.18	
2,040.20	354.20	1,941.98	23,025.47	27,396.61	4,371.14		
171.96	51.20	174.96	1,895.03	2,967.15	1,072.12		
77.85	18.40	78.11	883.42	1,472.07	588.65		
82.19	20.60	89.15	778.88	1,025.06	246.18		
218.95	58.00	199.27	3,157.92	4,240.93	1,083.01		
21.86	0.60	19.86	121.87	263.53	141.66		
98.16	17.40	101.13	944.39	1,503.88	559.49		
134.08	25.20	132.20	1,261.30	3,723.59	2,462.29		
97.97	14.80	92.95	794.99	1,132.98	337.99		
83.92	16.00	78.64	764.55	1,349.59	585.04		
51.06		45.95	875.62	876.71	1.09		
1,214.06	192.60	1,143.13	10,249.83	16,309.62	6,059.79		
235,302.14	600,356.40	298,240.43	7,768,419.46	8,059,354.89	331,174.99	40,239.56	
40,110.79	109,504.20	56,968.54	1,357,102.39	1,235,321.34	33,847.19	155,628.24	
275,412.93	709,860.60	355,208.97	9,125,521.85	9,294,676.23	365,022.18	195,867.80	

# NIAGARA SYSTEM

## Reserve for Renewals Account, October 31, 1923

Total provision for renewals to October 31, 1922.....	\$2,680,306.03
Deduct:	
Expenditures to October 31, 1922.....	204,885.01
	<u>\$2,475,421.02</u>
Added during the year ending October 31, 1923:	
Amount charged to municipalities as part of the cost of power delivered to them.....	\$235,302.14
Provision against equipment employed in respect of contracts with sundry companies.....	40,110.79
Interest at 4 per cent. per annum on the monthly balances to the credit of the account.....	99,016.84
Renewals Reserve provided on second-hand equipment purchased.....	1,575.18
	<u>376,004.95</u>
	<u>\$2,851,425.97</u>
Expenditures during the year ending October 31, 1923.....	66,983.51
	<u>66,983.51</u>
Balance carried forward October 31, 1923.....	<u><u>\$2,784,442.46</u></u>



# NIAGARA SYSTEM

## Reserve for Contingencies Account, October 31, 1923

Balance brought forward October 31, 1922.....		\$4,853.87
Added during the year ending October 31, 1923:		
Amounts charged to Municipalities as part of the cost of power delivered to them.....	\$600,356.40	
Provision against equipment employed in respect of contracts with sundry customers.....	109,504.20	
Interest at 4 per cent. per annum on monthly balances at the credit of the account.....	194.15	
		<u>710,054.75</u>
		\$714,908.62
Deduct:		
Expenditures to cover contingencies met with during the year ending October 31, 1923.....	\$174,325.53	
Net loss for year on power sold to sundry power customers including those of the Ontario Power Co. and Toronto Power Co.....	402,971.63	
		<u>577,297.16</u>
		<u><u>\$137,611.46</u></u>

## NIAGARA

Statement showing the total Sinking Fund requirements to be met by each Municipality Commission under Section 23 of the Act, Sinking Fund payments made by total of such Sinking Fund payments including

Municipality	Total sinking fund requirements chargeable to the municipality under the Act		Sinking fund requirements the payment of which has been deferred	
	(a) For period of	(b) Amount	(a) For period of	(b) Amount
		\$ c.		\$ c.
Acton.....	7 years ending Oct. 31, 1923	3,616.86	1 years ending Oct. 31, 1923	776.26
Agincourt....	1 " " " "	38.23	1 " " " "	38.23
Ailsa Craig...	7 " " " "	3,772.58	4 " " " "	2,485.44
Alvinston....	2 " " " "	1,142.86	2 " " " "	1,142.86
Aylmer.....	6 " " " "	5,228.20	6 " " " "	5,228.20
Ayr.....	7 " " " "	1,731.99	3 " " " "	808.27
Baden.....	7 " " " "	3,391.88	1 " " " "	506.53
Beachville....	7 " " " "	3,652.96	1 " " " "	643.79
Belle River...	1 " " " "	246.52	1 " " " "	246.52
Blenheim....	7 " " " "	4,680.53	4 " " " "	2,647.05
Bolton.....	7 " " " "	4,912.81	4 " " " "	2,851.13
Bothwell....	7 " " " "	4,632.15	4 " " " "	2,546.20
Brampton....	7 " " " "	9,295.01		
Brantford....	7 " " " "	29,507.56	3 years ending Oct. 31, 1923	16,442.48
Brigden.....	6 " " " "	3,108.59	5 " " " "	2,706.87
Burford.....	7 " " " "	2,178.30	4 " " " "	1,325.85
Burgessville...	7 " " " "	787.75	5 " " " "	605.55
Caledonia....	7 " " " "	869.08	1 " " " "	161.33
Chatham.....	7 " " " "	28,587.51	4 " " " "	18,317.65
Chippawa Vil.	(See end of table)			
Clinton.....	7 " " " "	5,244.28	3 years ending Oct. 31, 1923	2,510.07
Comber.....	7 " " " "	3,055.57	4 " " " "	2,080.88
Dashwood....	7 " " " "	2,430.17	6 " " " "	2,241.47
Delaware....	7 " " " "	531.73	4 " " " "	310.01
Dereham Tp..	5 " " " "	772.26	5 " " " "	772.26
Dorchester...	7 " " " "	567.43	3 " " " "	252.43
Drayton.....	6 " " " "	2,822.12	6 " " " "	2,822.12
Dresden.....	7 " " " "	3,371.19	4 " " " "	2,035.31
Drumbo.....	7 " " " "	653.99	3 " " " "	279.58
Dublin.....	7 " " " "	1,128.21	6 " " " "	1,114.77
Dundas.....	7 " " " "	6,303.54		
Dunnville....	6 " " " "	7,469.67	6 years ending Oct. 31, 1923	7,469.67
Dutton.....	7 " " " "	2,333.64	4 " " " "	1,334.88
Elmira.....	7 " " " "	5,319.82	2 " " " "	2,043.95
Elora.....	7 " " " "	4,911.51	3 " " " "	2,152.54
Embro.....	7 " " " "	2,283.45	3 " " " "	990.55
Etobicoke Tp.	7 " " " "	3,200.70	6 " " " "	3,165.89
Exeter.....	7 " " " "	7,574.88	5 " " " "	4,237.24
Fergus.....	7 " " " "	4,251.06	3 " " " "	2,073.52
Ford City....	1 " " " "	2,711.92		
Forest.....	7 " " " "	5,473.09	6 years ending Oct. 31, 1923	4,891.57
Galt.....	7 " " " "	27,609.21		
Georgetown...	7 " " " "	10,922.07	2 years ending Oct. 31, 1923	3,655.13
Glencoe.....	4 " " " "	2,111.02	4 " " " "	2,111.02
Goderich....	7 " " " "	17,142.20	3 " " " "	7,916.91
Granton.....	7 " " " "	1,643.62	5 " " " "	1,210.37
Guelph.....	7 " " " "	26,177.66		
Hagersville...	7 " " " "	5,259.96	2 years ending Oct. 31, 1923	2,027.07
Hamilton....	7 " " " "	83,639.91		
Harriston....	7 " " " "	6,159.27	5 years ending Oct. 31, 1923	4,728.22

## SYSTEM

## SINKING FUND

pality, Sinking Fund requirements the payment of which has been deferred by the certain Municipalities which have been operating more than five years and the interest allowed thereon to October 31, 1923

Sinking fund requirements paid (or charged) as part of the cost of power		Interest at 4% per annum allowed on sinking fund requirements which have been paid	Sinking fund paid by each municipality as part of the cost of power supplied by Ontario Power Co. and Toronto Power Co.	Total sinking fund payments and accumulated interest to the credit of the municipality on October 31, 1923
(a) For period of	(b) Amount			
	\$ c.	\$ c.	\$ c.	\$ c.
6 years ending Oct. 31, 1922	2,840.60	274.96	1,855.60	4,971.16
3 years ending Oct. 31, 1919	1,287.14	45.52	49.24	49.24
			867.75	2,200.41
			214.38	214.38
			1,434.14	1,434.14
4 years ending Oct. 31, 1920	923.72	54.57	560.06	1,538.35
6 " " " 1922	2,885.35	356.11	1,481.76	4,723.22
6 " " " 1922	3,009.17	300.30	2,063.01	5,372.48
			81.54	81.54
3 years ending Oct. 31, 1919	2,033.48	80.70	1,198.34	3,312.52
3 " " " 1919	2,061.68	86.00	856.07	3,003.75
3 " " " 1919	2,085.95	77.17	993.63	3,156.75
7 " " " 1923	9,295.01	1,031.29	7,391.34	17,717.64
4 " " " 1920	13,065.08	709.55	37,099.92	50,874.55
1 " " " 1918	401.72		436.60	838.32
3 " " " 1919	852.45	34.51	372.63	1,259.59
2 " " " 1918	182.20	2.59	195.82	380.61
6 " " " 1922	707.75	70.48	703.83	1,482.06
3 " " " 1919	10,269.86	391.11	19,176.37	29,837.34
4 years ending Oct. 31, 1920	2,734.21	152.37	1,410.00	4,296.58
3 " " " 1919	974.69	42.20	741.15	1,758.04
1 " " " 1917	188.70		343.91	532.61
3 " " " 1919	221.72	8.77	96.99	327.48
			453.69	453.69
4 years ending Oct. 31, 1920	315.00	18.21	184.73	517.94
3 years ending Oct. 31, 1919	1,335.88	46.56	377.56	377.56
4 " " " 1920	374.41	27.43	1,294.69	2,677.13
1 " " " 1917	13.44		185.64	587.48
			204.15	217.59
7 " " " 1923	6,303.54	841.40	8,462.81	15,607.75
3 years ending Oct. 31, 1919	998.76	35.90	2,124.36	2,124.36
5 " " " 1921	3,275.87	252.35	819.33	1,853.99
4 " " " 1920	2,758.97	162.63	2,813.30	6,341.52
			1,740.80	4,662.40
4 " " " 1920	1,292.90	80.81	353.15	1,726.86
1 " " " 1917	34.81		3,756.63	3,791.44
2 " " " 1918	3,337.64	101.90	1,462.17	4,901.71
4 " " " 1920	2,177.54	130.93	1,577.66	3,886.13
1 " " " 1923	2,711.92	5.48	2,172.39	4,889.79
1 " " " 1917	581.52		890.40	1,471.92
7 " " " 1923	27,609.21	3,152.07	25,388.08	56,149.36
5 " " " 1921	7,266.94	557.29	4,120.43	11,944.66
			481.99	481.99
4 years ending Oct. 31, 1920	9,225.29	514.45	3,466.41	13,206.15
2 " " " 1918	433.25	7.66	331.26	772.17
7 " " " 1923	26,177.66	2,898.16	31,979.89	61,055.71
5 " " " 1921	3,232.89	230.74	2,920.89	6,384.52
7 " " " 1923	83,639.91	8,092.20	136,091.27	227,823.38
2 " " " 1918	1,431.05	29.62	1,437.11	2,897.78



## NIAGARA

Statement showing the total Sinking Fund requirements to be met by each Municipality under Section 23 of the Act, Sinking Fund payments made by total of such Sinking Fund payments including

Municipality	Total sinking fund requirements chargeable to the municipality under the Act		Sinking fund requirements the payment of which has been deferred	
	(a) For period of	(b) Amount	(a) For period of	(b) Amount
		\$ c.		\$ c.
Hensall.....	7 years ending Oct. 31, 1923	3,534.98	5 years ending Oct. 31, 1923	2,303.69
Hespeler.....	7 " " " "	4,153.25		
Highgate.....	7 " " " "	2,087.52	5 years ending Oct. 31, 1923	1,453.00
Ingersoll.....	7 " " " "	10,537.53		
Kitchener.....	7 " " " "	50,134.08		
Lambeth.....	7 " " " "	1,173.26	4 years ending Oct. 31, 1923	733.18
Listowel.....	7 " " " "	8,480.02	5 " " " "	6,764.03
London.....	7 " " " "	100,253.67		
London Ry. C.	7 " " " "	17,714.49	3 years ending Oct. 31, 1923	7,345.85
Lucan.....	7 " " " "	3,259.33	4 " " " "	1,971.70
Lynden.....	7 " " " "	3,075.12	4 " " " "	1,710.66
Markham.....	4 " " " "	1,315.72	4 " " " "	1,315.72
Merlin.....	1 " " " "	425.73	1 " " " "	425.73
Milton.....	7 " " " "	9,232.61	2 " " " "	3,611.85
Milverton....	7 " " " "	5,532.45	5 " " " "	4,278.01
Mimico.....	7 " " " "	4,028.77	1 " " " "	1,342.97
Mitchell.....	7 " " " "	3,834.27		
Moorefield....	6 " " " "	1,435.34	6 years ending Oct. 31, 1923	1,435.34
Mt. Brydges..	7 " " " "	1,339.75	4 " " " "	673.39
Newbury.....	3 " " " "	415.66	3 " " " "	415.66
New Hamburg	7 " " " "	4,088.66		
New Toronto..	7 " " " "	26,355.37	3 years ending Oct. 31, 1923	11,248.60
Niagara Falls.	7 " " " "	3,525.74	4 " " " "	2,426.78
Niagara-on-L.	5 " " " "	633.23	5 " " " "	633.23
Norwich.....	7 " " " "	4,121.60	1 " " " "	679.80
Oil Springs...	6 " " " "	3,154.64	6 " " " "	3,154.64
Otterville....	7 " " " "	982.69	5 " " " "	794.84
Palmerston...	7 " " " "	4,351.55	5 " " " "	3,187.48
Paris.....	7 " " " "	5,679.55	3 " " " "	3,053.96
Parkhill.....	4 " " " "	2,122.03	4 " " " "	2,122.03
Petrolia.....	7 " " " "	11,230.84	5 " " " "	8,163.16
Plattsville...	7 " " " "	2,521.72	3 " " " "	686.73
Point Edward.	7 " " " "	2,521.01	5 " " " "	2,023.06
Port Credit...	7 " " " "	1,289.43	1 " " " "	308.12
Port Dover...	2 " " " "	715.01	2 " " " "	715.01
Port Stanley..	7 " " " "	4,746.34	1 " " " "	730.70
Preston.....	7 " " " "	13,933.53		
Princeton.....	7 " " " "	1,143.90	3 years ending Oct. 31, 1923	493.03
Queenston....	3 " " " "	42.21	3 " " " "	42.21
Ridgetown....	7 " " " "	4,945.85	4 " " " "	2,836.62
Riverside.....	1 " " " "	618.10		
Rockwood....	7 " " " "	1,618.97	2 years ending Oct. 31, 1923	518.91
Rodney.....	7 " " " "	1,861.15	6 " " " "	1,599.49
St. Clair Beach	1 " " " "	103.84		
St. George....	7 " " " "	1,694.17	4 years ending Oct. 31, 1923	939.00
St. Jacobs....	7 " " " "	1,177.56	6 " " " "	1,131.74
St. Marys....	7 " " " "	10,287.34		
St. Thomas...	7 " " " "	27,104.13		
Sarnia.....	7 " " " "	50,459.12	5 years ending Oct. 31, 1923	39,320.87
Scarboro Twp.	4 " " " "	1,009.49	4 " " " "	1,009.49

## SYSTEM—Continued

## SINKING FUND

pality, Sinking Fund requirements the payment of which has been deferred by the certain Municipalities which have been operating more than five years and the interest allowed thereon to October 31, 1923

Sinking fund requirements paid (or charged) as part of the cost of power		Interest at 4% per annum allowed on sinking fund requirements which have been paid	Sinking fund paid by each municipality as part of the cost of power supplied by Ontario Power Co. and Toronto Power Co.	Total sinking fund payments and accumulated interest to the credit of the municipality on October 31, 1923
(a) For period of	(b) Amount			
	\$ c.	\$ c.	\$ c.	\$ c.
2 years ending Oct. 31, 1918	1,231.29	32.42	409.55	1,673.26
7 " " " 1923	4,153.25	498.53	3,216.07	7,867.85
2 " " " 1918	634.52	9.04	349.68	993.24
7 " " " 1923	10,537.53	1,310.05	7,991.12	19,838.70
7 " " " 1923	50,134.08	5,386.09	53,201.79	108,721.96
3 " " " 1919	440.08	18.47	235.79	694.34
2 " " " 1918	1,715.99	33.40	3,052.03	4,801.42
7 " " " 1923	100,253.67	11,079.39	107,667.71	219,000.77
4 " " " 1920	10,368.64	640.85	7,659.61	18,669.10
3 " " " 1919	1,287.63	53.77	1,194.56	2,535.96
3 " " " 1919	1,364.46	54.46	719.20	2,138.12
			484.84	484.84
			176.99	176.99
5 years ending Oct. 31, 1921	5,620.76	411.94	6,212.25	12,244.95
2 " " " 1918	1,254.44	19.54	2,424.51	3,698.49
6 " " " 1922	2,685.80	199.54	4,227.97	7,113.31
7 " " " 1923	3,834.27	468.66	1,623.76	5,926.69
			221.45	221.45
3 years ending Oct. 31, 1919	666.36	26.61	202.21	895.18
			147.21	147.21
7 years ending Oct. 31, 1923	4,088.66	492.58	1,845.92	6,427.16
4 " " " 1920	15,106.77	645.00	16,937.15	32,688.92
3 " " " 1919	1,098.96	36.61	29,267.73	30,403.30
			1,319.26	1,319.26
6 years ending Oct. 31, 1922	3,441.80	347.90	1,876.94	5,666.64
			1,444.35	1,444.35
2 years ending Oct. 31, 1918	187.85	2.42	283.34	473.61
2 " " " 1918	1,164.07	27.16	1,404.03	2,595.26
4 " " " 1920	2,625.59	132.65	6,187.28	8,945.52
			416.70	416.70
2 years ending Oct. 31, 1918	3,067.68	61.47	4,536.31	7,665.46
4 " " " 1920	1,834.99	114.75	245.49	2,195.23
2 " " " 1918	497.95	10.21	963.37	1,471.53
6 " " " 1922	981.31	69.18	1,010.04	2,060.53
			351.67	351.67
6 years ending Oct. 31, 1922	4,015.64	406.63	1,434.78	5,857.05
7 " " " 1923	13,933.53	1,740.36	12,765.78	28,439.67
4 " " " 1920	650.87	43.73	132.60	827.20
			226.71	226.71
3 years ending Oct. 31, 1919	2,109.23	88.42	1,502.83	3,700.48
1 " " " 1923	618.10	3.02	385.02	1,006.14
5 " " " 1921	1,100.06	82.60	387.89	1,570.55
1 " " " 1917	261.66		453.76	715.42
1 " " " 1923	103.84		57.81	161.65
3 " " " 1919	755.17	26.90	527.32	1,309.39
1 " " " 1917	45.82		444.24	490.06
7 " " " 1923	10,287.34	1,173.42	5,943.87	17,404.63
7 " " " 1923	27,104.13	3,340.74	20,104.25	50,549.12
2 " " " 1918	11,138.25	221.27	22,711.40	34,070.92
			2,159.62	2,159.62

## NIAGARA

Statement showing the total Sinking Fund requirements to be met by each Municipality under Section 23 of the Act, Sinking Fund payments made by total of such Sinking Fund payments including

Municipality	Total sinking fund requirements chargeable to the municipality under the Act		Sinking fund requirements the payment of which has been deferred	
	(a) For period of	(b) Amount	(a) For period of	(b) Amount
		\$ c.		\$ c.
Seaforth.....	7 years ending Oct. 31, 1923	9,599.98		
Simcoe.....	7 " " " "	3,241.53	4 years ending Oct. 31, 1923	2,312.27
Springfield....	7 " " " "	1,181.36	6 " " " "	1,160.69
Stamford Twp	7 " " " "	980.06	5 " " " "	735.52
Stouffville....	1 " " " "	33.96	1 " " " "	33.96
Stratford.....	7 " " " "	28,492.34		
Strathroy.....	7 " " " "	9,360.74	3 years ending Oct. 31, 1923	4,285.94
Streetsville...	4 " " " "	2,835.96		
Sutton.....	1 " " " "	63.81	1 years ending Oct. 31, 1923	63.81
Tavistock....	7 " " " "	5,311.11	5 " " " "	4,094.63
Tecumseh....	1 " " " "	326.54		
Thamesford....	7 " " " "	2,493.57	2 years ending Oct. 31, 1923	1,130.06
Thamesville...	7 " " " "	2,107.02	4 " " " "	1,151.89
Thedford.....	2 " " " "	701.06	2 " " " "	701.06
Thorndale....	7 " " " "	2,525.81	3 " " " "	827.02
Thorold.....	1 " " " "	47.15		
Tilbury.....	7 " " " "	3,595.56	4 years ending Oct. 31, 1923	2,079.95
Tillsonburg...	7 " " " "	8,850.24		
Toronto.....	7 " " " "	383,394.94		
Toronto Twp.	7 " " " "	2,427.71	2 years ending Oct. 31, 1923	1,064.18
Walkerville...	7 " " " "	72,829.85	3 " " " "	29,464.18
Wallaceburg...	7 " " " "	15,059.72	4 " " " "	8,888.36
Wardsville....	3 " " " "	274.79	3 " " " "	274.79
Waterdown....	7 " " " "	1,950.87		
Waterford....	7 " " " "	2,350.44	4 years ending Oct. 31, 1923	1,356.44
Waterloo.....	7 " " " "	10,624.11		
Watford.....	7 " " " "	3,975.97	6 years ending Oct. 31, 1923	3,836.23
Welland.....	7 " " " "	12,710.51	6 " " " "	12,465.39
Well'sley....	7 " " " "	3,501.07	5 " " " "	2,557.12
West Lorne...	7 " " " "	2,442.59	5 " " " "	2,093.00
Weston.....	7 " " " "	10,658.96		
Windsor.....	7 " " " "	87,899.83	3 years ending Oct. 31, 1923	50,579.87
Woodbridge...	7 " " " "	2,944.72	3 " " " "	1,433.73
Woodstock...	7 " " " "	13,290.56		
Wyoming.....	7 " " " "	1,691.76	5 years ending Oct. 31, 1923	1,130.05
Zurich.....	7 " " " "	3,230.23	6 " " " "	3,030.83
S. Dorchester.	1 " " " "	48.19	1 " " " "	48.19
Rural power Districts—				
Aylmer.....	7 " " " "	492.89		
Baden.....	2 " " " "	394.10		
Beamsville...	1 " " " "	886.89		
Belle River...	1 " " " "	399.97		
Brant.....	10 " " " "	487.28		
Chatham.....	8 " " " "	849.97		
Delaware.....	1 " " " "	282.40		
Dorchester...	2 " " " "	1,391.76		
Drumbo.....	2 " " " "	318.74		
Dundas.....	3 " " " "	700.40		



## SYSTEM—Continued

## SINKING FUND

pality, Sinking Fund requirements the payment of which has been deferred by the certain Municipalities which have been operating more than five years and the interest allowed thereon to October 31, 1923

Sinking fund requirements paid (or charged) as part of the cost of power		Interest at 4% per annum allowed on sinking fund requirements which have been paid	Sinking fund paid by each municipality as part of the cost of power supplied by Ontario Power Co. and Toronto Power Co.	Total sinking fund payments and accumulated interest to the credit of the municipality on October 31, 1923
(a) For period of	(b) Amount			
	\$ c.	\$ c.	\$ c.	\$ c.
7 years ending Oct. 31, 1923	9,599.98	1,361.10	2,642.53	13,603.61
3 " " " 1919	929.26	35.48	2,379.30	3,344.04
1 " " " 1917	20.62		174.12	194.74
2 " " " 1918	244.54	2.58	3,537.30	3,784.42
			11.78	11.78
7 years ending Oct. 31, 1923	28,492.34	2,961.09	21,892.67	53,346.10
4 " " " 1920	5,074.80	305.49	3,173.60	8,553.89
4 " " " 1923	2,835.96	148.95	2,031.13	5,016.04
			13.92	13.92
2 years ending Oct. 31, 1918	1,216.48	17.20	1,788.23	3,021.91
1 " " " 1923	326.54	2.12	163.61	492.27
5 " " " 1921	1,363.51	76.77	689.51	2,129.79
3 " " " 1919	955.13	41.85	550.85	1,547.83
			131.14	131.14
4 years ending Oct. 31, 1920	1,698.79	119.56	349.24	2,167.59
1 " " " 1923	47.15		1,775.22	1,822.37
3 " " " 1919	1,515.61	61.71	1,315.53	2,892.85
7 " " " 1923	8,850.24	1,171.64	3,104.89	13,126.77
7 " " " 1923	383,394.94	40,043.46	638,761.20	1,062,199.60
5 " " " 1921	1,363.53	90.42	2,171.38	3,625.33
4 " " " 1920	43,365.67	2,944.46	30,211.24	76,521.37
3 " " " 1919	6,171.36	223.25	5,832.85	12,227.46
			64.28	64.28
7 years ending Oct. 31, 1923	1,950.87	227.87	952.03	3,130.77
3 " " " 1919	994.00	38.18	1,196.26	2,228.44
7 " " " 1923	10,624.11	1,178.11	10,593.41	22,395.63
1 " " " 1917	139.74		516.44	656.18
1 " " " 1917	245.12		14,039.61	14,284.73
2 " " " 1918	943.95	15.99	936.97	1,896.91
2 " " " 1918	349.59	6.46	1,212.91	1,568.96
7 " " " 1923	10,658.96	1,111.66	9,153.11	20,923.73
4 " " " 1920	37,319.96	2,331.78	51,041.29	90,693.03
4 " " " 1920	1,510.99	82.10	1,368.48	2,961.57
7 " " " 1923	13,290.56	1,463.98	15,267.11	30,021.65
2 " " " 1918	561.71	12.87	282.51	857.09
1 " " " 1917	199.40		389.22	588.62
			9.38	9.38
7 years ending Oct. 31, 1923	492.89	43.69	35.45	572.03
2 " " " 1923	394.10	7.46	108.75	510.31
1 " " " 1923	886.89		129.17	1,016.06
1 " " " 1923	399.97		70.65	470.62
10 " " " 1923	487.28	19.00	80.46	586.74
8 " " " 1923	849.97	27.57	169.42	1,046.96
1 " " " 1923	282.40		27.12	309.52
2 " " " 1923	1,391.76	16.32	285.35	1,693.43
2 " " " 1923	318.74	2.51	41.19	362.44
3 " " " 1923	700.40	21.64	72.47	794.51

## NIAGARA

Statement showing the total Sinking Fund requirements to be met by each Municipality under Section 23 of the Act, Sinking Fund payments made by total of such Sinking Fund payments including

Municipality	Total sinking fund requirements chargeable to the municipality under the Act		Sinking fund requirements the payment of which has been deferred	
	(a) For period of	(b) Amount	(a) For period of	(b) Amount
		\$ c.		\$ c.
Exeter .....	1 years ending Oct. 31, 1923	386.66		
Galt .....	2 " " " "	87.44		
Homer .....	1 " " " "	65.91		
Ingersoll .....	10 " " " "	144.52		
Jordan .....	2 " " " "	247.89		
London .....	1 " " " "	118.05		
Lynden .....	2 " " " "	275.21		
Markham .....	1 " " " "	244.95		
Niagara .....	2 " " " "	257.96		
Petrolia .....	1 " " " "	12.59		
Preston .....	2 " " " "	1,414.61		
Ridgetown .....	2 " " " "	717.06		
St. Jacobs .....	1 " " " "	131.86		
St. Thomas .....	1 " " " "	60.29		
Saltfleet .....	2 " " " "	3,849.07		
Sandwich .....	2 " " " "	202.68		
Sarnia .....	1 " " " "	78.11		
Simcoe .....	1 " " " "	89.15		
Stamford .....	2 " " " "	318.31		
Streetsville .....	1 " " " "	19.86		
Tavistock .....	1 " " " "	101.13		
Wallaceburg .....	1 " " " "	132.20		
Waterdown .....	1 " " " "	92.95		
Welland .....	2 " " " "	114.89		
Woodbridge .....	1 " " " "	45.95		
Woodstock .....	11 " " " "	1,625.53		
Municipalities which are supplied with power directly from the Ontario Power Co.				
Merritton .....	3 years ending Oct. 31, 1923	152.08		
Port Colborne .....	3 " " " "	863.10		
St. Catharines .....	10 " " " "	3,293.83		
Chippawa Village .....	2 " " " "	120.94		
Chippawa R.P.D. ....	2 " " " "	459.95		
Welland (Port Robinson) ..	11 " " " "	1,551.87		
Grantham Tp. ....	9 " " " "	4,222.83		
Port Dalhousie .....	9 " " " "	949.35		
Totals—Municipalities .....		1,531,166.59		384,307.08
Totals—Companies (from commencement of operation) .....		353,905.26		
Grand Totals .....		1,885,071.85		384,307.08

## SYSTEM—Continued

## SINKING FUND

pality, Sinking Fund requirements the payment of which has been deferred by the certain Municipalities which have been operating more than five years and the interest allowed thereon to October 31, 1923

Sinking fund requirements paid (or charged) as part of the cost of power		Interest at 4% per annum allowed on sinking fund requirements which have been paid	Sinking fund paid by each municipality as part of the cost of power supplied by Ontario Power Co. and Toronto Power Co.	Total sinking fund payments and accumulated interest to the credit of the municipality on October 31, 1923
(a) For period of	(b) Amount			
	\$ c.	\$ c.	\$ c.	\$ c.
1 years ending Oct. 31, 1923	386.66		64.76	451.42
2 " " " 1923	87.44	0.20	28.51	116.15
1 " " " 1923	65.91		10.00	75.91
10 " " " 1923	144.52	28.63	4.28	177.43
3 " " " 1923	247.89	0.68	15.24	263.81
1 " " " 1923	118.05		18.73	136.78
2 " " " 1923	275.21	4.39	41.01	320.61
1 " " " 1923	244.95		32.29	277.24
2 " " " 1923	257.96	4.63	100.66	363.25
1 " " " 1923	12.59		1.25	13.84
2 " " " 1923	1,414.61	25.65	525.00	1,965.26
2 " " " 1923	717.06	6.55	100.71	824.32
1 " " " 1923	131.86		23.01	154.88
1 " " " 1923	60.29		8.92	69.21
2 " " " 1923	2,849.07	36.28	558.52	3,443.87
2 " " " 1923	202.68	1.11	66.04	269.83
1 " " " 1923	78.11		16.41	94.52
1 " " " 1923	89.15		18.38	107.53
2 " " " 1923	318.31	4.76	87.55	410.62
1 " " " 1923	19.86		0.54	20.40
1 " " " 1923	101.13		15.52	116.65
1 " " " 1923	132.20		22.48	154.68
1 " " " 1923	92.95		13.20	106.15
2 " " " 1923	144.89	1.45	26.90	143.24
1 " " " 1923	45.95			45.95
11 " " " 1923	1,625.53	106.50	171.81	1,903.84
3 years ending Oct. 31, 1923	152.08	7.44	1,574.05	1,733.57
3 " " " 1923	863.10	48.69	2,786.95	3,698.74
10 " " " 1923	3,293.83	309.34	23,770.71	27,373.88
2 " " " 1923	120.94	2.57	521.52	645.03
2 " " " 1923	459.95	4.17	109.88	574.00
11 " " " 1923	1,551.87	245.36	1,422.99	3,220.22
7 " " " 1923	4,222.83	676.81	248.43	5,148.07
9 " " " 1923	949.35	166.42	888.92	2,004.69
	1,146,859.51	108,109.72	1,517,500.09	2,772,469.32
	353,905.26	57,948.54	.....	411,853.80
	1,500,764.77	166,058.26	1,517,500.09	3,184,323.12



## NIAGARA

Statement showing the net Credit or Charge to each Municipality in respect of power made and interest added during the year. Also the net amount Credited ending October 31, 1923, and the accumulated amount standing

Municipality	Date commenced operating	Net credit or charge at October 31, 1922		Cash receipts and payments on account of such credits and charges, also adjustments made during the year	
		Credit	Charge	Credited	Charged
		\$ c.	\$ c.	\$ c.	\$ c.
Acton.....	Jan., 1913	341.76			341.76
Agincourt.....	Nov., 1922				
Ailsa Craig.....	Jan., 1916	214.08			214.08
Alvinston.....	April, 1922		554.37	554.37	
Aylmer.....	Mar., 1918	733.48			733.48
Ayr.....	Jan., 1915	424.13			424.13
Baden.....	May, 1912	53.55			53.55
Beachville.....	Aug., 1912	515.72			515.72
Belle River.....	Dec., 1922				
Blenheim.....	Nov., 1915	1,320.49			1,320.49
Bolton.....	Feb., 1915		1,693.76		1,022.35
Bothwell.....	Sept., 1915	1,156.53			1,156.53
Brampton.....	Nov., 1911		2,091.19	2,053.89	
Brantford.....	Feb., 1914		3,197.53	3,197.53	64.61
Brigden.....	Jan., 1918		1,566.89	966.89	
Burford.....	June, 1915		2,182.01	2,188.42	
Burgessville.....	Nov., 1916		77.60	77.60	
Caledonia.....	Oct., 1912	107.99			107.99
Chatham.....	Feb., 1915	4,185.04			4,185.04
Chippawa.....	Sept., 1919	366.24			721.85
Clinton.....	Mar., 1914		369.30	369.30	
Comber.....	May, 1915		672.36	679.69	
Dashwood.....	Sept., 1917		20.39	20.39	
Delaware.....	Mar., 1915	332.37			332.37
Dereham Township.....	Sept., 1919		1,978.78		
Dorchester.....	Dec., 1914	64.43			64.43
Drayton.....	Mar., 1918	361.24			361.24
Dresden.....	April, 1915	113.64			113.64
Drumbo.....	Dec., 1914	278.68			278.68
Dublin.....	Oct., 1917		1,021.89		
Dundas.....	Jan., 1911		1,747.63	1,747.63	
Dunnville.....	June, 1918		2,246.83		
Dutton.....	Sept., 1915	91.80			91.80
Elmira.....	Nov., 1913	1,548.71			1,548.71
Elora.....	Nov., 1914	1,502.99			1,502.99
Embro.....	Jan., 1915		1,314.06	283.20	
Etobicoke Township.....	Aug., 1917		1,150.95	1,150.95	
Exeter.....	June, 1916		1,699.96	1,699.96	
Fergus.....	Nov., 1914	689.82			689.82
Ford City.....	Nov., 1922				
Forest.....	Mar., 1917	741.61			741.61
Galt.....	May, 1911		5,332.77	5,332.77	
Georgetown.....	Sept., 1913	75.59			75.59
Glencoe.....	Aug., 1920	999.01			999.01
Goderich.....	Feb., 1914		10,175.45		
Grantham Township.....	May, 1915		309.23		
Granton.....	July, 1916	148.22			148.22
Guelph.....	Dec., 1910		6,326.43	6,326.43	
Hagersville.....	Sept., 1913	2,180.91			2,180.91
Hamilton.....	Feb., 1911		54,120.49	482.30	

## SYSTEM

## CREDIT OR CHARGE

supplied to it to October 31, 1922, the cash receipts and payments thereon, adjustments or Charged to each Municipality in respect of power supplied in the year as a Credit or Charge to each Municipality at October 31, 1923

Interest at 4% per annum added during the year		Net amount credited or charged in respect of power supplied in the year ending October 31, 1923		Accumulated amount standing as a credit or charge on October 31, 1923	
Credited	Charged	Credited	Charged	Credit	Charge
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
7.94		1,773.38		1,781.32	
		444.29		444.29	
5.32		78.10		83.42	
	16.16	1,853.99		1,837.83	
18.25		1,903.28		1,921.53	
10.22		1,029.09		1,039.31	
1.24		489.39		490.63	
11.98		1,646.57		1,658.55	
		2,084.08		2,084.08	
35.02		1,074.67		1,109.69	
	84.32	1,956.47			843.96
28.56		1,613.48		1,642.04	
	50.33		783.13		870.76
	84.09	5,456.60		5,307.90	
	40.73		424.81		1,065.54
	23.48	638.12		621.05	
	3.01	298.78		295.77	
2.68		371.29		373.97	
97.81		11,298.05		11,395.86	
5.48			321.74		671.87
	8.78	1,072.75		1,063.97	
	6.61	1,013.76		1,014.48	
	0.53	80.33		79.80	
9.56		465.51		475.07	
	79.15		495.05		2,552.98
1.60		193.26		194.86	
8.54		252.67		261.21	
2.83		682.71		685.54	
7.04		279.91		286.95	
	40.88	91.11			971.66
	44.43	1,966.24		1,921.81	
	89.87	2,751.03		414.33	
2.28		398.96		401.24	
36.03		3,113.10		3,149.13	
39.93		1,468.19		1,508.12	
	52.19	278.19			804.86
	26.74	3,114.47		3,087.73	
	42.85	2,788.75		2,745.90	
17.16		1,550.91		1,568.07	
		5,018.75		5,018.75	
19.13		508.81		527.94	
	160.13	7,493.70		7,333.57	
1.97		1,245.22		1,247.19	
25.55		1,006.42		1,031.97	
	407.02	2,348.96			8,233.51
	12.37		747.54		1,069.14
3.69		107.68		111.37	
	240.58	6,602.52		6,361.94	
59.47		919.64		979.11	
	2,156.73		18,231.01		74,025.93

## NIAGARA

Statement showing the net Credit or Charge to each Municipality in respect of power made and interest added during the year. Also the net amount Credited ending October 31, 1923, and the accumulated amount standing

Municipality	Date commenced operating	Net credit or charge at October 31, 1922		Cash receipts and payments on account of such credits and charges, also adjustments made during the year	
		Credit	Charge	Credited	Charged
		\$ c.	\$ c.	\$ c.	\$ c.
Harriston.....	July, 1916	34.79			34.79
Hensall.....	Jan., 1917		516.87	516.87	
Hespeler.....	Feb., 1911		72.21	72.21	
Highgate.....	Dec., 1916	46.97			46.97
Ingersoll.....	May, 1911	442.76			442.76
Kitchener.....	Jan., 1911		17,929.24	5,552.32	
Lambeth.....	April, 1915	1,007.07			1,007.07
Ljstowel.....	June, 1916		299.92	299.92	
London.....	Jan., 1911		14,871.34	14,871.34	
London Railway Commission.....	Aug., 1914		8,295.07		
Lucan.....	Feb., 1915		63.14	63.14	
Lynden.....	Nov., 1915	396.82			396.82
Markham.....	April, 1920	2,316.18			2,316.18
Merlin.....	Dec., 1922				
Merritton.....	Nov., 1920		527.79	720.88	
Milton.....	April, 1913	705.42			705.42
Milverton.....	June, 1916	32.21			32.21
Mimico.....	May, 1912		1,679.69		
Mitchell.....	Sept., 1911	44.20			44.20
Moorefield.....	Mar., 1918		156.49	156.49	
Mount Brydges.....	Mar., 1915	202.35			202.35
Newbury.....	Mar., 1921	268.47			268.47
New Hamburg.....	Mar., 1911		36.42	36.42	
New Toronto.....	Feb., 1914		7,030.08	7,030.08	
Niagara Falls.....	Dec., 1915		12,049.42		
Niagara-on-Lake.....	Aug., 1919	187.53			187.53
Norwich.....	May, 1912		102.06	102.06	
Oil Springs.....	Feb., 1918	1,864.82			1,864.82
Otterville.....	Feb., 1916	42.03			42.03
Palmerston.....	July, 1916	351.16			351.16
Paris.....	Feb., 1914		628.60	628.60	
Parkhill.....	May, 1920	607.75			607.75
Petrolia.....	May, 1916	638.99			638.99
Plattsville.....	Dec., 1914		1,440.31		
Point Edward.....	— 1917				
Port Colborne.....	Mar., 1920		556.29		
Port Credit.....	Aug., 1912		975.51		
Port Dalhousie.....	Nov., 1912		492.90	714.19	
Port Dover.....	Dec., 1921	233.20			233.20
Port Robinson.....	Mar., 1913		695.89		
Port Stanley.....	April, 1912	890.86			890.86
Preston.....	Jan., 1911	130.36			130.36
Princeton.....	Jan., 1915		384.86	384.86	
Queenston.....	Mar., 1921		115.88	115.88	
Ridgetown.....	Dec., 1915	644.58			644.58
Riverside.....	Nov., 1922				
Rockwood.....	Sept., 1913		678.83	678.83	
Rodney.....	Feb., 1917	388.22			388.22
St. Catharines.....			10,720.94	10,720.94	
St. Clair Beach.....	Nov., 1922				



## SYSTEM—Continued

## CREDIT OR CHARGE

supplied to it to October 31, 1922, the cash receipts and payments thereon, adjustments or Charged to each Municipality in respect of power supplied in the year as a Credit or Charge to each Municipality at October 31, 1923

Interest at 4% per annum added during the year		Net amount credited or charged in respect of power supplied in the year ending October 31, 1923		Accumulated amount standing as a credit or charge on October 31, 1923	
Credited	Charged	Credited	Charged	Credit	Charge
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
0.87		603.14		604.01	
	15.95	706.02		690.07	
1.70		994.69		996.39	
0.14		446.82		446.96	
11.01		3,612.04		3,623.05	
	590.31	13,873.57		906.34	
22.76		1,121.13		1,143.89	
	8.41	393.30		384.89	
	347.13		2,487.74		2,834.87
	331.80		10,499.68		19,126.55
	1.46	59.93		58.47	
11.26		446.87		458.13	
76.42		1,002.33		1,078.75	
		981.16		981.16	
	19.37	4.29		178.01	
17.54		1,108.96		1,126.50	
0.75			489.41		488.66
	67.19	1,407.97			338.91
1.03		521.06		522.09	
	3.61	49.53		45.92	
5.12		467.50		472.62	
7.24		433.20		440.44	
	0.97	735.42		734.45	
	188.75	2,762.62		2,573.87	
	481.98	114.19			12,417.21
4.35		620.76		625.11	
	3.40	1,820.71		1,817.31	
45.78		2,564.49		2,609.97	
1.10		294.49		295.59	
8.23		656.30		664.53	
	16.39	1,873.49		1,857.10	
16.15		793.61		809.76	
14.85		3,259.66		3,274.51	
	57.61	218.90			1,279.02
		434.26		434.26	
	22.25	312.79			265.75
	39.02	605.19			409.34
	18.06		849.17		645.94
6.08		1,244.21		1,250.29	
	27.83		192.35		916.07
23.38		1,230.89		1,254.27	
3.23		2,231.94		2,235.17	
	8.89	307.79		298.90	
	2.95	2.72			0.23
15.30		2,060.13		2,075.43	
		1,524.68		1,524.68	
	25.90	458.98		433.08	
10.22		47.40		57.62	
	418.40	3,254.75		2,836.35	
		1,011.50		1,011.50	

## NIAGARA

Statement showing the net Credit or Charge to each Municipality in respect of power made and interest added during the year. Also the net amount Credited ending October 31, 1923, and the accumulated amount standing

Municipality	Date commenced operating	Net credit or charge at October 31, 1922		Cash receipts and payments on account of such credits and charges, also adjustments made during the year	
		Credit	Charge	Credited	Charged
		\$ c.	\$ c.	\$ c.	\$ c.
St. George.....	Sept., 1915	576.54			576.54
St. Jacobs.....	Sept., 1917	262.12			262.12
St. Marys.....	May, 1911	536.58			536.58
St. Thomas.....	April, 1911	759.42			759.42
Sarnia.....	Dec., 1916	3,417.37			3,417.37
Scarboro Township.....	Aug., 1918	661.49			661.49
Seaforth.....	Nov., 1911		192.89	192.89	
Simcoe.....	Aug., 1915	723.14			723.14
Springfield.....	Aug., 1917	135.83			135.83
Stamford Township.....	Nov., 1916		231.86	231.86	
Stouffville.....	Sept., 1923				
Stratford.....	Jan., 1911		1,272.74	1,272.74	
Strathroy.....	Dec., 1914	368.39			368.39
Streetsville.....		5,151.35			
Sutton.....	Aug., 1923				
Tavistock.....	Nov., 1916	6.15			6.15
Tecumseh.....	Nov., 1922				
Thamesford.....	Feb., 1914	866.94			866.94
Thamesville.....	Oct., 1915	717.01			717.01
Thedford.....	May, 1922	152.41			152.41
Thorold.....					
Thornedale.....	Mar., 1914		1,222.11		
Tilbury.....	April, 1915	2,106.73			2,106.73
Tillsonburg.....	Aug., 1911		1,131.98	1,131.98	
Toronto.....	June, 1911		144,119.29	144,119.29	
Toronto Township.....	Aug., 1913	9.43			9.43
Walkerville.....	Nov., 1914	13,100.30			13,100.30
Wallaceburg.....	Feb., 1915	514.28			514.28
Wardsville.....	June, 1921		47.33	47.33	
Waterdown.....	Nov., 1911	47.25			47.25
Waterford.....	April, 1915	581.51			581.51
Waterloo.....	Dec., 1910		2,183.84	2,183.84	
Watford.....	Sept., 1917	1,599.83			1,599.83
Welland.....	Sept., 1917		7,609.08		
Wellesley.....	Nov., 1916		193.12	193.12	
West Lorne.....	Jan., 1917	1,123.81			1,123.81
Weston.....	Jan., 1911		830.62		
Windsor.....	Oct., 1914	25,331.00			25,331.00
Woodbridge.....	Dec., 1914		146.11	146.11	
Woodstock.....	Jan., 1911		785.27	785.27	
Wyoming.....	Nov., 1916		1,721.52	1,000.00	
Zurich.....	Sept., 1917	191.16			191.16
Rural Power Districts—					
Aylmer.....	Nov., 1920		1,339.84		
Baden.....			388.52		
Beamsville.....	Jan., 1923				
Belle River.....	Dec., 1922				
Brant.....	Oct., 1914	694.68			15.41

## SYSTEM—Continued

## CREDIT OR CHARGE

supplied to it to October 31, 1922, the cash receipts and payments thereon, adjustments or Charged to each Municipality in respect of power supplied in the year as a Credit or Charge to each Municipality at October 31, 1923

Interest at 4% per annum added during the year		Net amount credited or charged in respect of power supplied in the year ending October 31, 1923		Accumulated amount standing as a credit or charge on October 31, 1923	
Credited	Charged	Credited	Charged	Credit	Charge
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
15.69			13.85	1.84	
6.38		61.92		68.30	
12.47			185.20		172.73
18.88		7,347.06		7,365.94	
85.01		10,003.86		10,088.87	
17.46		2,030.14		2,047.60	
	5.22	504.31		499.09	
18.66		2,091.44		2,110.30	
3.23			316.47		313.24
	6.28	590.52		584.24	
		152.32		152.32	
	42.40	2,520.53		2,478.13	
8.55		1,991.58		2,000.13	
206.05		607.49		5,964.89	
			183.76		183.76
0.15			1,425.61		1,425.46
		995.09		995.09	
21.25		526.94		548.19	
19.03		511.02		530.05	
3.52		1,652.80		1,656.32	
		1,221.48		1,221.48	
	48.88		67.39		1,338.38
53.90		2,450.25		2,504.15	
	27.73	3,917.81		3,890.08	
	5,354.13	11,686.21		6,332.08	
0.23			29.23		29.00
304.34		18,933.45		19,237.79	
12.78		386.97		399.75	
	1.22	84.58		83.36	
1.22			196.06		194.84
14.45		636.15		650.60	
	60.78	3,766.79		3,706.01	
41.48		1,910.29		1,951.77	
	304.36	2,805.09			5,108.35
	5.18	73.92		68.74	
27.59		408.20		435.79	
	33.22	6,830.82		5,966.98	
588.51		53,859.95		54,448.46	
	3.40	1,249.60		1,246.20	
	19.96	5,546.31		5,526.35	
	66.43	199.31			588.64
4.43		421.92		426.35	
	53.59		414.24		1,807.67
	15.54		181.09		585.15
		1,734.71		1,734.71	
		1,965.95		1,965.95	
27.79		1,453.31		2,160.37	



## NIAGARA

Statement showing the net Credit or Charge to each Municipality in respect of power made and interest added during the year. Also the net amount Credited ending October 31, 1923, and the accumulated amount standing

Rural Power Districts	Date commenced operating	Net credit or charge at October 31, 1922		Cash receipts and payments on account of such credits and charges, also adjustments made during the year	
		Credit	Charge	Credited	Charged
		\$ c.	\$ c.	\$ c.	\$ c.
Chatham.....	May, 1922	873.10			
Chippawa.....	July, 1922	464.73			
Delaware.....	Oct., 1922				
Dorchester.....	Dec., 1921	3,548.96			
Drumbo.....	Aug., 1922	143.30			
Dundas.....	Jan., 1921	1,335.81			
Exeter.....	Nov., 1922				
Galt.....	Oct., 1922	56.71			
Homer.....	Nov., 1922				
Ingersoll.....	Oct., 1914	297.96			
Jordan.....	May, 1922	153.55			
London.....	Nov., 1922				
Lynden.....	Feb., 1922	120.73			
Markham.....	Dec., 1922				
Niagara.....	Jan., 1922	590.28			
Petrolia.....	Aug., 1923				
Preston.....	April, 1922	4,763.31			
Ridgetown.....	Mar., 1922	2,149.39			
St. Jacobs.....	Nov., 1922				
St. Thomas.....	Aug., 1923				
Saltfleet.....	Feb., 1922	3,503.46			3,564.29
Sandwich.....	July, 1922	491.77			
Sarnia.....	June, 1923				
Simcoe.....	Nov., 1922				
Stamford.....	Mar., 1922	564.11			
Streetsville.....	Nov., 1922				
Tavistock.....	April, 1923				
Wallaceburg.....	Jan., 1923				
Waterdown.....	Oct., 1922				
Weland.....	April, 1922	184.95			
Woodbridge.....	Jan., 1923				
Woodstock.....	Feb., 1913	1,402.63			
Totals.....		110,304.24	343,585.74	221,100.78	88,835.73

## SYSTEM—Continued

## CREDIT OR CHARGE

supplied to it to October 31, 1922, the cash receipts and payments thereon, adjustments or Charged to each Municipality in respect of power supplied in the year as a Credit or Charge to each Municipality at October 31, 1923

Interest at 4% per annum added during the year		Net amount credited or charged in respect of power supplied in the year ending October 31, 1923		Accumulated amount standing as a credit or charge on October 31, 1923	
Credited	Charged	Credited	Charged	Credit	Charge
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
34.92	.....	2,104.01	.....	3,012.03	.....
18.59	.....	.....	1,184.95	.....	701.63
.....	.....	1,090.53	.....	1,090.53	.....
141.96	.....	3,360.40	.....	7,051.32	.....
5.73	.....	1,030.77	.....	1,179.80	.....
.....	.....	.....	.....	.....	.....
46.72	.....	.....	396.88	985.65	.....
.....	.....	1,826.35	.....	1,826.35	.....
2.27	.....	276.83	.....	335.81	.....
.....	.....	411.02	.....	411.02	.....
11.92	.....	.....	35.02	274.86	.....
.....	.....	.....	.....	.....	.....
6.14	.....	231.46	.....	391.15	.....
.....	.....	619.12	.....	619.12	.....
11.54	.....	499.66	.....	631.93	.....
.....	.....	2,005.36	.....	2,005.36	.....
23.61	.....	1,598.16	.....	2,212.05	.....
.....	.....	.....	.....	.....	.....
.....	.....	44.66	.....	44.66	.....
190.53	.....	2,280.26	.....	7,234.10	.....
85.98	.....	3,059.11	.....	5,294.48	.....
.....	.....	600.49	.....	600.49	.....
.....	.....	.....	88.18	.....	88.18
.....	.....	.....	.....	.....	.....
116.59	.....	4,371.14	.....	4,426.90	.....
19.67	.....	1,072.12	.....	1,583.56	.....
.....	.....	588.65	.....	588.65	.....
.....	.....	246.18	.....	246.18	.....
22.56	.....	1,083.01	.....	1,669.68	.....
.....	.....	.....	.....	.....	.....
.....	.....	141.66	.....	141.66	.....
.....	.....	559.49	.....	559.49	.....
.....	.....	2,462.29	.....	2,462.29	.....
.....	.....	337.99	.....	337.99	.....
7.40	.....	585.04	.....	777.39	.....
.....	.....	.....	.....	.....	.....
.....	.....	1.09	.....	1.09	.....
56.11	.....	6,059.79	.....	7,518.53	.....
.....	.....	.....	.....	.....	.....
3,079.28	12,416.93	331,174.99	40,239.56	322,951.12	142,369.79

### NIAGARA SYSTEM RURAL LINES

Statement showing the Interest and Sinking Fund charged by the Commission to the Municipalities which operate the respective Rural Lines for the year ending October 31, 1923

Operated by	Capital cost	Interest	Sinking fund	Total interest and sinking fund charged
	\$ c.	\$ c.	\$ c.	\$ c.
Ancaster.....	5,159.03	257.95	92.86	350.81
Bolton.....	2,110.45	105.52	37.99	143.51
Bothwell.....	6,571.84	355.88	547.44	903.32
Brampton.....	588.87	29.44	10.60	40.04
Dereham township.....	29,243.50	1,483.42	526.39	2,009.81
Elora.....	777.82	38.89	14.00	52.89
Etobicoke.....	54,608.68	2,984.09	982.96	3,967.05
Georgetown.....	8,889.59	444.48	160.01	604.49
Goderich.....	2,313.36	115.67	41.64	157.31
Louth township.....	2,771.19	138.56	49.88	188.44
Lucan.....	333.26	16.66	6.00	22.66
Milton.....	5,061.21	160.50	57.78	218.28
Norwich.....	34,874.53	1,753.20	625.72	2,378.92
St. Thomas.....	1,933.82	96.69	34.81	131.50
Scarboro township.....	4,521.25	271.29	81.39	352.68
Stratford.....	4,058.47	202.92	73.05	275.97
Toronto.....	1,020.01	38.77	13.96	52.73
Vaughan township.....	22,536.69	1,253.56	404.58	1,658.14
Walkerville.....	3,656.19	186.06	65.81	251.87
Waterdown.....	15,831.49	796.25	278.30	1,074.55
Waterford.....	3,399.87	169.99	61.20	231.19
Waterloo.....	5,062.60	230.60	91.12	321.72
Welland.....	19,617.60	980.88	353.12	1,334.00
Weston.....	5,234.46	209.38	94.22	303.60
Windsor.....	26,653.12	1,574.74	479.76	2,054.50
Totals.....	266,828.90	13,895.39	5,184.59	19,079.98
Non-operating.....	10.65			
	266,839.55			



### NIAGARA SYSTEM RURAL LINES

**Statement showing the total Sinking Fund requirements of each line—all of which have been paid—and the total of such Sinking Fund payments with interest allowed thereon to October 31, 1923**

Lines operated by	Sinking fund requirements which have been paid		Interest at 4% per annum allowed on sinking fund payments	Total sinking fund payments and accumulated interest to Oct. 31, 1923
	Period covered	Amount		
		\$ c.	\$ c.	\$ c.
Ancaster twp. ....	10 years ending Oct. 31, 1923	914.03	194.16	1,108.19
Bolton .....	9 " " " 1923	275.88	39.15	315.15
Bothwell .....	8 " " " 1923	3,397.37	379.69	3,777.06
Brampton .....	6 " " " 1923	65.36	7.59	72.95
Dereham twp. ....	6 " " " 1923	3,033.64	307.98	3,341.62
Elora .....	10 " " " 1923	125.91	22.13	148.04
Etobicoke .....	8 " " " 1923	7,065.32	1,008.83	8,074.15
Georgetown .....	10 " " " 1923	1,425.00	252.63	1,677.63
Goderich .....	10 " " " 1923	391.54	72.12	463.66
Louth twp. ....	5 " " " 1923	307.59	33.25	340.84
Lucan .....	4 " " " 1923	24.00	1.48	25.48
Milton .....	10 " " " 1923	175.62	23.33	198.95
Norwich .....	11 " " " 1923	5,030.54	802.71	5,833.25
St. Thomas .....	10 " " " 1923	312.18	54.82	367.00
Scarboro twp. ....	6 " " " 1923	842.98	106.45	949.43
Stratford .....	11 " " " 1923	723.86	143.75	867.61
Toronto .....	11 " " " 1923	62.15	7.02	69.17
Vaughan twp. ....	9 " " " 1923	2,245.17	222.82	2,467.99
Walkerville .....	9 " " " 1923	523.81	90.98	614.79
Waterdown .....	10 " " " 1923	2,030.78	349.85	2,380.63
Waterford .....	9 " " " 1923	403.34	47.09	450.43
Waterloo .....	10 " " " 1923	695.58	104.02	799.60
Welland .....	9 " " " 1923	3,614.00	691.98	4,305.98
Weston .....	10 " " " 1923	913.97	176.41	1,090.38
Windsor .....	8 " " " 1923	1,901.25	171.53	2,072.78
Totals .....		36,500.87	5,311.77	41,812.64

## SEVERN

## Operating Account for Year

## COSTS OF OPERATION AS PROVIDED FOR UNDER SECTIONS 6C AND 23 OF THE ACT

Power purchased from Wasdells system and Orillia .....	\$10,236.97
Costs of operating and maintaining the generating plant, transmission lines, stations, etc., including the proportion of administrative expenses chargeable to the operation of this system.....	64,679.07
Interest on capital investment.....	83,034.09
Provisions for renewal of generating plant, lines and stations, etc.....	20,627.97
Provisions for Contingencies:	
By charges against municipalities.....	\$9,774.60
By charges against contracts with private companies which purchased power.....	1,867.20
By appropriating the net profit on power sold to private companies..	9,680.42
	<hr/>
	21,322.22
Provisions for Sinking Fund:	
By charges against municipalities.....	\$18,847.04
By charges against contracts with private companies which purchased power.....	3,076.74
	<hr/>
	21,923.78
	<hr/>
	<u>\$221,824.10</u>

## SYSTEM

Ending October 31, 1923

## REVENUE FOR PERIOD

Collected from municipalities .....	\$223,819.15
Power sold to private companies .....	34,635.92
	<u>\$258,455.07</u>
Deduct:	
Amounts collected from certain municipalities in excess of the sum required to be paid by them for power supplied in the period...	\$37,498.70
Add:	
Amounts due by certain municipalities, being the difference between sums paid and the cost of power supplied to them in the period.	867.73
	<u>36,630.97</u>
	<u><u>\$221,824.10</u></u>



SEVERN

Statement showing the amount to be paid by each Municipality as the Cost, under received by the Commission from each Municipality on account of such cost, upon ascertainment (by annual adjustment) of the actual cost of

Municipality	Interim rates per horsepower collected by Commission during year		Share of capital cost of system on which interest and fixed charges are payable	Average horse-power supplied in year after correction for power factor	Cost of power purchased from Orillia and Wasdells system	Share of operating	
	To Dec. 31, 1922	To Oct. 31, 1923				Operating, main-tenance and adminis-trative expenses	Interest
	\$ c.	\$ c.	\$ c.		\$ c.	\$ c.	\$ c.
Alliston.....	65.00	55.00	70,588.78	126.0	166.19	1,854.89	3,844.02
Barrie.....	29.00	29.00	191,651.25	1,086.5	1,433.09	8,923.37	10,257.54
Beeton.....	85.00	75.00	55,928.37	79.1	104.33	1,549.42	3,050.64
Bradford.....	75.00	75.00	56,650.67	69.9	92.20	1,772.82	3,092.52
Coldwater.....	60.00	40.00	20,947.97	89.8	118.45	928.60	1,003.76
Collingwood....	45.00	40.00	291,213.97	1,353.9	1,785.78	14,601.42	15,657.74
Cookstown.....	60.00	60.00	16,128.31	35.7	47.09	748.68	876.61
Creemore.....	70.00	60.00	26,149.69	65.5	86.39	1,050.66	1,416.35
Elmvale.....	37.00	35.00	30,065.10	168.8	222.65	1,764.53	1,609.55
Midland.....	32.00	30.00	372,825.77	2,433.3	3,209.51	14,506.70	19,886.65
Penetang.....	30.00	30.00	119,252.25	688.7	908.39	5,235.20	6,245.38
Port McNicoll...	40.00	30.00	8,642.08	47.6	62.78	351.41	462.88
Stayner.....	45.00	40.00	27,550.25	121.9	160.79	1,448.59	1,476.92
Thornton.....	85.00	85.00	11,437.53	14.3	18.86	360.80	624.32
Tottenham.....	90.00	90.00	37,450.69	39.5	52.10	1,125.74	2,046.00
Victoria Harbor.	45.00	40.00	12,085.38	47.1	62.12	665.56	651.97
Waubaushene..	45.00	40.00	6,131.09	25.9	34.16	338.11	330.29
Rural Power Districts—							
Barrie.....			5,356.82	4.4	5.80	49.71	102.91
Nottawasaga.....			13,263.84	12.5	16.49	499.14	724.72
Stayner.....			17,436.02	6.0	7.91	223.26	291.66
Totals—Municipalities.....			1,390,755.83	6,516.4	8,595.08	57,998.61	73,652.43
Totals—Companies.....			176,383.88	1,244.8	1,641.89	6,680.46	9,381.66
Totals—Non-operating.....			12,123.81				
Grand Totals.....			1,579,263.52	7,761.2	10,236.97	64,679.07	83,034.09

## SYSTEM

## COST OF POWER

Section 23 of the Act, of Power supplied to it by the Commission, the amount and the amount remaining to be credited or charged to each Municipality power supplied to it in the year ending October 31, 1923

costs and fixed charges			Total cost of power for year as provided to be paid under section 23 of Act	Amounts paid to the Commission by each municipality	Amounts remaining to be credited or charged to each municipality upon ascertainment of the actual cost of power by annual adjustment		Sinking fund for the years mentioned hereunder charged as part of the cost of power in the year 1922-1923
Renewals	Contingencies	Sinking fund			Credited	Charged	
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	
945.49	189.00	.....	6,999.59	7,166.85	167.26	.....	1917-18
2,522.98	1,629.75	3,019.57	27,786.30	31,510.40	3,724.10	.....	1920-21
750.35	118.65	.....	5,573.39	6,066.33	492.94	.....	.....
760.65	104.85	.....	5,823.04	5,240.61	.....	582.43	.....
246.89	134.70	338.72	2,771.12	3,590.81	819.69	.....	1920-21
3,851.27	2,030.85	4,598.31	42,525.37	56,279.45	13,754.08	.....	1920-21
215.61	53.55	.....	1,941.54	2,144.00	202.46	.....	.....
348.37	98.25	418.22	3,418.24	3,818.66	400.42	.....	1919-20
395.89	253.20	587.64	4,833.46	5,971.71	1,138.25	.....	1920-21
4,891.40	3,649.95	6,345.37	52,489.58	63,903.66	11,414.08	.....	1920-21
1,536.14	1,033.05	2,048.19	17,006.35	20,659.51	3,653.16	.....	1922-23
113.85	71.40	163.16	1,225.48	1,515.99	290.51	.....	1919-20
363.27	182.85	595.33	4,227.75	4,997.26	769.51	.....	1920-21
153.56	21.45	.....	1,178.99	1,217.57	38.58	.....	.....
503.24	59.25	.....	3,786.33	3,551.25	.....	235.08	.....
160.36	70.65	242.89	1,853.55	1,925.82	72.27	.....	1919-20
81.24	38.85	122.58	945.23	1,053.77	108.54	.....	1919-20
45.49	6.60	33.74	244.25	226.34	.....	17.91	1922-23
337.05	18.75	237.68	1,833.83	2,286.68	452.85	.....	1922-23
97.32	9.00	95.64	724.79	692.48	.....	32.31	1922-23
18,320.42	9,774.60	18,847.04	187,188.18	223,819.15	37,498.70	867.73	.....
2,307.55	1,867.20	3,076.74	24,955.50	34,635.92	*9,680.42	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....
20,627.97	11,641.80	21,923.78	212,143.68	258,455.07	.....	.....	.....

\*NOTE—Transferred to credit of Contingency Reserve.

SEVERN SYSTEM

Reserve for Renewals Account, October 31, 1923

Total provision for renewals to October 31, 1922.....	\$141,153.75
Deduct expenditures to October 31, 1922.....	8,410.03
Balance brought forward October 31, 1922.....	\$132,743.72
Added during the year ending October 31, 1923:	
Amounts charged to municipalities as part of the cost of power delivered to them.....	\$18,320.42
Provision against equipment employed in respect of contracts with sundry companies.....	2,307.55
Interest at 4% per annum on monthly balances to the credit of the account.....	5,309.75
	25,937.72
Balance carried forward October 31, 1923.....	\$158,681.44

SEVERN

Statement showing the total Sinking Fund requirements to be met by each Municipality under Section 23 of the Act, Sinking Fund payments made by and the total of such Sinking Fund payments

Municipality	Total sinking fund requirements chargeable to the municipality under the Act		Sinking fund requirements the payment of which has been deferred	
	(a) For period of	(b) Amount	(a) For period of	(b) Amount
		\$ c.		\$ c.
Alliston.....	6 years ending Oct. 31, 1923	6,944.75	6 years ending Oct. 31, 1923	6,944.75
Barrie.....	7 " " " "	16,634.75	2 " " " "	6,554.41
Beeton.....	6 " " " "	5,975.47	6 " " " "	5,975.47
Bradford.....	6 " " " "	4,834.89	6 " " " "	4,834.89
Coldwater.....	7 " " " "	1,998.85	2 " " " "	694.58
Collingwood....	7 " " " "	34,921.29	2 " " " "	10,080.58
Cookstown.....	5 " " " "	2,301.02	6 " " " "	2,301.02
Creemore.....	7 " " " "	2,922.74	3 " " " "	1,352.49
Elmvale.....	7 " " " "	3,192.24	2 " " " "	1,076.69
Midland.....	7 " " " "	27,330.71	2 " " " "	8,554.12
Penetang.....	7 " " " "	14,506.84		
Port McNicoll..	7 " " " "	957.56	3 years ending Oct. 31, 1923	460.52
Stayner.....	7 " " " "	3,219.89	2 " " " "	1,033.21
Thornton.....	5 " " " "	986.30	5 " " " "	986.30
Tottenham.....	6 " " " "	3,249.67	6 " " " "	3,249.67
Victoria Harbor.	7 " " " "	1,438.61	3 " " " "	691.29
Waubauskene...	7 " " " "	740.07	3 " " " "	355.20
Rural Power Districts—				
Barrie.....	1 " " " "	33.74		
Nottawasaga.	2 " " " "	471.00		
Stayner.....	1 " " " "	95.64		
Totals—Municipalities.....		132,756.03		55,145.19
Totals—Companies (from commencement of operations).....		22,456.15		
Grand Totals.....		155,212.18		55,145.19



SEVERN SYSTEM

Reserve for Contingencies Account, October 31, 1923

Balance brought forward October 31, 1922.....	\$29,220.08
Added during the year ending October 31, 1923:	
Amounts charged to municipalities as part of the cost of power delivered to them.....	\$9,774.60
Provision against equipment employed in respect of contracts with sundry companies.....	1,867.20
Net profits from contracts with sundry power customers.....	9,680.42
Interest at 4% per annum on mont ly balances to the credit of the account.....	1,168.80
	<u>22,491.02</u>
	\$51,711.10
Balance carried forward October 31, 1923.....	\$51,711.10

SYSTEM

SINKING FUND

pality, Sinking Fund requirements, the payment of which has been deferred by the certain Municipalities which have been operating more than five years, including interest allowed thereon to October 31, 1923

Sinking fund requirements paid (or charged) as part of the cost of power		Interest at 4% per annum allowed on sinking fund requirements which have been paid	Total sinking fund payments and accumulated interest to the credit of the municipality on October 31, 1923
(a) For period of	(b) Amount		
	\$ c.	\$ c.	\$ c.
5 years ending Oct. 31, 1923	10,080.34	648.20	10,728.54
5 years ending Oct. 31, 1923	1,304.27	94.13	1,398.40
5 " " " "	24,840.71	1,967.49	26,808.20
4 years ending Oct. 31, 1923	1,570.25	94.47	1,664.74
5 " " " "	2,115.55	137.83	2,253.38
5 " " " "	18,776.59	1,145.28	19,921.87
7 " " " "	14,506.84	1,613.43	16,120.27
4 " " " "	497.04	26.27	523.31
5 " " " "	2,186.68	140.37	2,327.05
4 years ending Oct. 31, 1923	747.32	39.67	786.99
4 " " " "	384.87	20.85	405.72
1 " " " "	33.74		33.74
2 " " " "	471.00	9.33	480.33
1 " " " "	95.64		95.64
	77,610.84	5,937.34	83,548.18
(From commencement of operations).....	22,456.15	2,877.37	25,333.52
	100,066.99	8,814.71	108,881.70

## SEVERN

Statement showing the net Credit or Charge to each Municipality in respect of power year, also the net amount Credited or Charged to each Municipality in respect amount standing as a Credit or Charge

Municipality	Date commenced operating	Net credit or charge at October 31, 1922		Cash receipts and payments on account of such credits and charges made during the year	
		Credit	Charge	Credited	Charged
		\$ c.	\$ c.	\$ c.	\$ c.
Alliston.....	June, 1918		3,362.20		
Barrie.....	April, 1913	13,118.85			13,118.85
Beeton.....	Aug., 1918	281.38			281.38
Bradford.....	Oct., 1918		6,846.80		
Coldwater.....	Mar., 1913	2,081.94			2,081.94
Collingwood.....	Mar., 1913	34,065.45			34,065.45
Cookstown.....	May, 1918	216.46			216.46
Creemore.....	Nov., 1914	3,396.83			2,388.33
Elmvale.....	June, 1913	3,944.82			3,944.82
Midland.....	July, 1911	28,649.05			13,461.10
Penetang.....	July, 1911	16,812.74			16,812.74
Port McNicoll.....	Jan., 1915	1,650.29			1,650.29
Stayner.....	Oct., 1913	4,383.09			3,706.16
Thornton.....	Nov., 1918		1,157.38		
Tottenham.....	Oct., 1918		3,054.26		
Victoria Harbor.....	July, 1914	1,713.51			1,206.95
Waubashene.....	Dec., 1914	830.62			830.62
Rural Power Districts—					
Barrie.....					
Nottawasaga.....			199.59		
Stayner.....					
Totals.....		111,145.03	14,620.23		93,765.09

## EUGENIA

## Operating Account for

## COSTS OF OPERATION AS PROVIDED FOR UNDER SECTIONS 6C AND 23 OF THE ACT

Power purchased from Wingham and from Niagara system.....	\$7,762.67
Costs of operating and maintaining the generating plant, transmission lines, stations, etc., including the proportion of administrative expenses chargeable to the operation of this system.....	70,037.67
Interest on capital investment.....	122,790.62
Provision for renewal of generating plant, lines, stations, etc.....	25,310.97
Provisions for contingencies:—	
By charges against municipalities.....	\$8,464.35
By charges against contracts with private companies, which purchased power.....	363.60
By appropriating the net profit on power sold to private companies.....	447.62
	9,275.57
Provisions for sinking fund:	
By charges against municipalities.....	\$25,067.75
By charges against contracts with private companies which purchased power.....	1,422.35
	26,490.10
	<u>\$261,667.60</u>

SYSTEM

CREDIT OR CHARGE

supplied to it to October 31, 1922, the cash payments, and interest added during the of power supplied in the year ending October 31, 1923, and the accumulated to each Municipality at October 31, 1923

Interest at 4% per annum added during the year		Net amount credited or charged in respect of power supplied in the year ending October 31, 1923		Accumulated amount standing as a credit or charge on October 31, 1923	
Credited	Charged	Credited	Charged	Credit	Charge
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
	134.49	167.26			3,329.43
336.39		3,724.10		4,060.49	
7.34		492.94		500.28	
	273.87		582.43		7,703.10
53.60		819.69		873.29	
819.70		13,754.08		14,573.78	
23.91		202.46		226.37	
108.28		400.42		1,517.20	
94.00		1,138.25		1,232.25	
1,105.36		11,414.08		27,707.39	
457.63		3,653.16		4,110.79	
30.34		290.51		320.85	
122.06		769.51		1,568.50	
	46.30	38.58			1,165.10
	122.17		235.08		3,411.51
55.35		72.27		634.18	
21.69		108.54		130.23	
			17.91		17.91
	7.98	452.85		245.28	
			32.31		32.31
3,235.65	584.81	37,498.70	867.73	57,700.88	15,659.36

SYSTEM

Year ending October 31, 1923

REVENUE FOR PERIOD

Collected from municipalities.....	\$253,219.58
Power sold to private companies.....	10,906.43
	<u>\$264,126.01</u>
Deduct:	
Amounts collected from certain municipalities in excess of the sum required to be paid by them for power supplied in the period..	\$11,166.39
Add:	
Amounts due by certain municipalities, being the difference between sums paid and the costs of power supplied to them in the period.	8,707.98
	<u>2,458.41</u>
	<u><u>\$261,667.60</u></u>



## EUGENIA

Statement showing the amount to be paid by each Municipality as the Cost, received by the Commission from each Municipality on account of such upon ascertainment (by annual adjustment) of the actual

Municipality	Interim rates per horsepower collected by Commission during Year		Share of capital cost of system on which interest and fixed charges are payable	Average horse-power supplied in year after correction for power factor	Cost of power purchased from Wingham and Niagara system	Share of operating	
	To Dec. 31, 1922	To Oct. 31, 1923				Operating, maintenance and administrative expenses	Interest
	\$ c.	\$ c.	\$ c.		\$ c.	\$ c.	\$ c.
Arthur.....	85.00	85.00	65,616.34	94.1	124.12	2,699.73	3,958.00
Chatsworth....	70.00	60.00	11,406.55	34.1	44.98	465.02	682.45
Chesley.....	55.00	50.00	99,194.63	272.5	359.43	3,739.68	5,912.01
Dundalk.....	55.00	45.00	30,401.39	111.5	147.07	1,436.73	1,812.53
Durham.....	50.00	40.00	92,567.51	372.5	491.32	4,190.60	5,508.51
Elmwood.....	55.00	55.00	13,474.78	34.4	45.37	513.53	808.02
Flesherton....	55.00	55.00	15,238.02	43.7	57.64	854.68	912.26
Grand Valley..	60.00	60.00	37,095.28	70.7	93.25	1,581.18	2,232.25
Hanover.....	35.00	35.00	347,916.46	1,322.4	1,744.24	12,308.63	20,728.24
Holstein.....	90.00	90.00	12,028.35	10.7	14.12	306.07	727.50
Hornings Mills..			10,856.77	5.0	6.59	672.99	658.10
Kincardine....	48.00	70.00	120,711.19	188.9	249.16	2,967.48	7,275.62
Lucknow.....	60.00	65.00	53,304.04	77.8	102.62	1,696.08	3,194.19
Markdale.....	50.00	40.00	23,347.19	92.6	122.14	1,047.34	1,389.77
Mount Forest..	65.00	60.00	73,446.31	188.3	248.37	3,128.50	4,404.10
Neustadt.....	55.00	45.00	60,991.75	152.8	201.54	1,998.37	3,658.33
Orangeville....	65.00	60.00	94,763.79	212.7	280.55	3,543.19	5,691.68
Owen Sound....	40.00	35.00	418,086.54	1,633.7	2,154.84	13,104.83	24,894.88
Paisley.....		80.00	15,563.21	9.7	12.79	248.40	332.30
Priceville.....	47.00	65.00	6,508.91	10.2	13.45	139.58	392.30
Ripley.....	60.00	70.00	45,719.43	60.7	80.06	1,344.30	2,743.12
Shelburne.....	50.00	50.00	52,959.22	159.1	209.85	1,992.82	3,168.31
Tara.....	90.00	90.00	40,471.84	40.7	53.68	727.81	2,446.41
Teeswater.....	40.00	50.00	58,672.85	129.4	170.68	1,815.34	3,524.70
Wingham.....	45.00	55.00	177,538.13	312.7	412.45	4,614.98	10,680.14
Rural Power Districts—							
Flesherton.....			2,394.70	1.0	1.32	269.89	145.20
Walkerton Quarry.....			1,768.33	1.0	1.32	67.08	107.14
Totals—Municipalities.....			1,982,043.51	5,642.9	7,442.95	67,474.83	117,988.06
Totals—Companies.....			80,282.72	242.4	319.72	2,562.84	4,802.56
Non-operating capital.....			38,348.31				
Grand Totals.....			2,100,674.54	5,885.3	7,762.67	70,037.67	122,790.62

## SYSTEM

## COST OF POWER

under Section 23 of the Act, of Power supplied to it by the Commission, the amount cost, and the amount remaining to be credited or charged to each Municipality cost of power supplied to it in the year ending October 31, 1923

costs and fixed charges.			Total cost of power for year as provided to be paid under section 23 of Act	Amounts paid to the Commission by each municipality	Amounts remaining to be credited or charged to each municipality upon ascertainment of the actual cost of power by annual adjustment		Sinking fund for the years mentioned hereunder charged as part of the cost of power in the year 1922-1923
Renewals	Contingencies	Sinking fund			Credited	Charged	
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	
814.04	141.15	1,434.33	9,171.37	7,999.18	.....	1,172.19	1921-22
140.36	51.15	202.12	1,586.08	2,036.66	450.58	.....	1922-23
1,215.92	408.75	1,812.99	13,448.78	13,878.05	429.27	.....	1921-22
372.78	167.25	536.80	4,473.16	5,233.12	759.96	.....	1922-23
1,132.93	558.75	1,631.42	13,513.53	15,465.92	1,952.39	.....	1922-23
166.18	51.60	.....	1,584.70	1,810.45	225.75	.....	.....
187.62	65.55	270.17	2,347.92	2,402.50	54.58	.....	1922-23
459.10	106.05	623.86	5,095.69	4,004.50	.....	1,091.19	1921-22
4,263.15	1,983.60	6,350.96	47,378.82	46,376.10	.....	1,002.72	1921-22
149.62	16.05	217.57	1,430.93	963.00	.....	467.93	1921-22
135.35	7.50	194.91	1,675.44	859.01	.....	816.43	1922-23
1,496.37	283.35	.....	12,271.98	12,589.20	317.22	.....	.....
656.95	116.70	.....	5,766.54	4,698.94	.....	1,067.60	.....
285.84	138.90	428.40	3,412.39	3,892.06	479.67	.....	1921-22
905.78	282.45	1,304.32	10,273.52	11,502.75	1,229.23	.....	1922-23
752.40	229.20	.....	6,839.84	6,995.74	155.90	.....	.....
1,170.60	319.05	1,690.76	12,695.83	12,943.33	247.50	.....	1921-22
5,120.13	2,450.55	7,372.98	55,098.21	58,728.28	3,630.07	.....	1922-23
68.34	14.55	.....	676.38	1,117.41	441.03	.....	.....
80.68	15.30	.....	641.31	628.79	.....	12.52	.....
564.17	91.05	.....	4,822.70	3,890.50	.....	923.20	.....
651.62	238.65	921.44	7,182.69	7,954.39	771.70	.....	1921-22
503.14	61.05	.....	3,792.09	3,662.25	.....	129.84	.....
724.92	194.10	.....	6,429.74	6,236.94	.....	192.80	.....
2,196.57	469.05	.....	18,373.19	16,682.77	.....	1,690.42	.....
60.24	1.50	42.99	521.14	389.00	.....	132.14	.....
48.43	1.50	31.73	257.20	278.74	21.54	.....	.....
24,323.23	8,464.35	25,067.75	250,761.17	253,219.58	11,166.39	8,707.98	.....
987.74	363.60	1,422.35	10,458.81	10,906.43	*447.62	.....	.....
.....	.....	.....	.....	.....	.....	.....	.....
25,310.97	8,827.95	26,490.10	261,219.98	264,126.01	.....	.....	.....

\*NOTE—Transferred to the credit of Contingency Reserve.

## EUGENIA SYSTEM

## Reserve for Renewals Account, October 31, 1923

Total provision for renewals to October 31, 1922.....	\$149,194.08	
Deduct expenditures to October 31, 1922.....	11,993.39	
Balance brought forward, October 31, 1922.....		\$137,200.69
Added during the year ending October 31, 1923:		
Amounts charged to municipalities as part of the cost of power delivered to them.....	\$24,323.23	
Provision against equipment employed in respect of contracts with sundry companies.....	987.74	
Interest at 4% per annum on monthly balances to the credit of the account.....	5,488.03	
Renewals reserve provided on second-hand equipment purchased.....	4,874.44	
		35,673.44
		\$172,874.13
Expenditures during the year ending October 31, 1923.....		3,518.60
		<u>\$169,355.53</u>



## EUGENIA SYSTEM

## Reserve for Contingencies Account, October 31, 1923

Total provision for contingencies to October 31, 1922.....	\$12,801.38
Added during the year ending October 31, 1923:	
Amounts charged to municipalities as part of the cost of power delivered to them.....	\$8,464.35
Provision against equipment employed in respect of contracts with sundry companies.....	363.60
Net profits from contracts with sundry power customers.....	447.62
Interest at 4% per annum on monthly balances to the credit of the account.....	512.06
	<hr/> 9,787.63
	\$22,589.01
Deduct:	
Expenditures during the year ending October 31, 1923.....	2,427.71
Balance carried forward October 31, 1923.....	<hr/> <hr/> \$20,161.30

## EUGENIA

Statement showing the total Sinking Fund requirements to be met by each Muni  
the Commission under Section 23 of the Act, Sinking Fund payments made  
the total Sinking Fund payments including interest

Municipality	Total sinking fund requirements chargeable to the municipality under the Act		Sinking fund requirements the payment of which has been deferred	
	(a) For period of	(b) Amount	(a) For period of	(b) Amount
		\$ c.		\$ c.
Arthur.....	3 years ending Oct. 31, 1923	4,246.61	1 year ending Oct. 31, 1923	1,172.24
Chatsworth.....	3 " " " "	635.81		
Chesley.....	3 " " " "	5,341.44	1 year ending Oct. 31, 1923	1,750.92
Dundalk.....	3 " " " "	1,585.90		
Durham.....	3 " " " "	4,258.76		
Elmwood.....	3 " " " "	886.12	3 years ending Oct. 31, 1923	886.12
Flesherton.....	3 " " " "	870.88		
Grand Valley...	3 " " " "	1,922.58	1 year ending Oct. 31, 1923	661.10
Hanover.....	3 " " " "	18,241.54	1 " " " "	6,138.94
Holstein.....	3 " " " "	652.98	1 " " " "	215.45
Hornings Mills..	2 " " " "	276.67		
Kincardine.....	3 " " " "	5,144.05	3 years ending Oct. 31, 1923	5,144.05
Lucknow.....	3 " " " "	2,599.72	3 " " " "	2,599.72
Markdale.....	3 " " " "	1,291.72	1 year " " "	411.61
Mount Forest...	3 " " " "	4,148.78		
Neustadt.....	3 " " " "	3,486.74	3 years " " "	3,486.74
Orangeville.....	3 " " " "	4,850.90	1 year ending Oct. 31, 1923	1,685.66
Owen Sound.....	3 " " " "	22,342.74		
Paisley.....	1 " " " "	98.41	1 year ending Oct. 31, 1923	98.41
Priceville.....	3 " " " "	299.69	3 years " " "	299.69
Ripley.....	3 " " " "	2,401.94	3 " " " "	2,401.94
Shelburne.....	3 " " " "	3,058.10	1 " " " "	938.33
Tara.....	3 " " " "	2,232.39	3 " " " "	2,232.39
Teeswater.....	3 " " " "	2,703.46	3 " " " "	2,703.46
Wingham.....	3 " " " "	9,396.99	3 " " " "	9,396.99
Rural Power Districts—				
Flesherton....	2 " " " "	72.80		
Walkerton				
Quarry.....	2 " " " "	57.37		
Totals—Municipalities.....		103,105.09		42,223.76
Totals—Companies (from commencement of operations).....		3,946.61		
Grand Totals.....		107,051.70		42,223.76

## SYSTEM

## SINKING FUND

cipality, Sinking Fund requirements the payment of which has been deferred by by certain Municipalities which have been operating more than five years, and allowed thereon to October 31, 1923

Sinking fund requirements paid (or charged) as part of the cost of power		Interest at 4% per annum allowed on sinking fund requirements which have been paid	Total sinking fund payments and accumulated interest to the credit of the municipality on October 31, 1923
(a) For period of	(b) Amount		
	\$ c.	\$ c.	\$ c.
2 years ending Oct. 31, 1923	3,074.37	65.60	3,139.97
3 years ending Oct. 31, 1923	635.81	26.00	661.81
2 " " " "	3,590.52	71.10	3,661.62
3 " " " "	1,585.90	65.57	1,651.47
3 " " " "	4,258.76	151.13	4,409.89
3 years ending Oct. 31, 1923	870.88	37.15	908.03
2 " " " "	1,261.48	25.51	1,286.99
2 " " " "	12,102.60	230.07	12,332.67
2 " " " "	437.53	8.80	446.33
2 " " " "	276.67	3.27	279.94
2 years ending Oct. 31, 1923	880.11	18.07	898.18
3 " " " "	4,148.78	175.89	4,324.67
2 " " " "	3,165.24	58.98	3,224.22
3 " " " "	22,342.74	922.08	23,264.82
2 years ending Oct. 31, 1923	2,119.77	47.93	2,167.70
2 years ending Oct. 31, 1923	72.80	1.19	73.99
2 " " " "	57.37	1.03	58.40
(From commencement of operations).....	60,881.33	1,909.37	62,790.70
	3,946.61	164.78	4,111.39
	64,827.94	2,074.15	66,902.09



## EUGENIA

Statement showing the net Credit or Charge to each Municipality in respect of power added during the year, also the net amount Credited or Charged to each and the accumulated amount standing as a Credit

Municipality	Date commenced operating	Net credit or charge at October 31, 1922		Cash receipts and payments on account of such credits and charges made during the year	
		Credit	Charge	Credited	Charged
		\$ c.	\$ c.	\$ c.	\$ c.
Arthur.....	Dec., 1916	.....	5,224.23	.....	.....
Chatsworth.....	Dec., 1915	391.62	.....	.....	391.62
Chesley.....	July, 1916	214.30	.....	.....	214.30
Dundalk.....	Dec., 1915	743.46	.....	.....	743.46
Durham.....	Dec., 1915	6,258.84	.....	.....	6,258.84
Elmwood.....	April, 1918	.....	64.25	64.25	.....
Flesherton.....	Dec., 1915	.....	1,889.91	1,400.00	.....
Grand Valley.....	Dec., 1916	1,373.42	.....	.....	1,373.42
Hanover.....	Sept., 1916	10,398.74	.....	.....	10,398.74
Holstein.....	May, 1916	.....	4,177.96	.....	.....
Hornings Mills.....	July, 1916	.....	.....	.....	.....
Kincardine.....	Mar., 1921	.....	6,463.93	154.22	.....
Lucknow.....	Jan., 1921	7.80	.....	.....	7.80
Markdale.....	Mar., 1916	1,390.15	.....	.....	1,390.15
Mount Forest.....	Dec., 1915	.....	5,536.50	.....	.....
Neustadt.....	Dec., 1918	2,861.46	.....	.....	2,861.46
Orangeville.....	July, 1916	.....	3,758.94	.....	.....
Owen Sound.....	Dec., 1915	4,168.14	.....	.....	7,344.31
Paisley.....	Sept., 1923	.....	.....	.....	.....
Priceville.....	Mar., 1921	.....	139.81	.....	.....
Ripley.....	Jan., 1921	.....	168.29	168.29	.....
Shelburne.....	July, 1916	.....	508.99	508.99	.....
Tara.....	Feb., 1918	.....	3,951.75	.....	.....
Teeswater.....	Dec., 1920	.....	610.63	587.31	.....
Wingham.....	Dec., 1920	.....	1,266.77	1,266.77	.....
Rural Power Districts—					
Flesherton.....	Feb., 1922	21.16	.....	.....	.....
Walkerton.....	Feb., 1922	1.13	.....	.....	.....
Totals.....		27,830.22	33,761.96	4,149.83	30,984.10

## SYSTEM

## CREDIT OR CHARGE

supplied to it to October 31, 1922, the cash receipts and payments thereon, interest Municipality in respect of power supplied in the year ending October 31, 1923, or Charge to each Municipality at October 31, 1923

Interest at 4% per annum added during the year		Net amount credited or charged in respect of power supplied in the year ending October 31, 1923		Accumulated amount standing as a credit or charge on October 31, 1923	
Credited	Charged	Credited	Charged	Credit	Charge
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
	208.97		1,172.19		6,605.39
7.94		450.58		458.52	
4.30		429.27		433.57	
15.46		759.96		775.42	
157.78		1,952.39		2,110.17	
1.27		225.75		227.02	
	46.90	54.58			482.23
32.85			1,091.19		1,058.34
229.60			1,002.72		773.12
	167.12		467.93		4,813.01
			816.43		816.43
	257.11	317.22			6,249.60
0.19			1,067.60		1,067.41
27.69		479.67		507.36	
	221.46	1,229.23			4,528.73
60.75		155.90		216.65	
	150.36	247.50			3,661.80
22.66		3,630.07		476.56	
		441.03		441.03	
	5.59		12.52		157.92
	4.25		932.20		936.45
	14.83	771.70		756.87	
	158.07		129.84		4,239.66
	26.94		192.80		243.06
	63.67		1,690.42		1,754.09
0.85			132.14		110.13
0.05		21.54		22.72	
561.39	1,325.27	11,166.39	7,891.55	6,425.89	37,497.37

EUGENIA SYSTEM

Operating Account for Year

Interest on capital investment.....	\$189.28
Provision for sinking fund.....	58.42
	<u>\$247.70</u>

EUGENIA SYSTEM RURAL LINES

Statement showing Interest and Sinking Fund charges on each line for the year ending October 31, 1923

	Capital cost	Interest	Sinking fund	Total interest and sinking fund charges	Revenue from municipalities
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Flesherton.....	1,857.19	115.29	33.47	148.76	148.76
Markdale.....	1,241.33	66.01	22.34	88.35	88.35
Ripley.....	143.14	7.98	2.61	10.59	10.59
Totals.....	3,241.66	189.28	58.42	247.70	247.70

WASDELLS

Operating Account for Year

COSTS OF OPERATION AS PROVIDED FOR UNDER SECTIONS 6C AND 23 OF THE ACT

Costs of operating and maintaining the generating plant, transmission lines, stations, etc., including the proportion of administrative expenses chargeable to the operation of the system.....	\$18,775.68
Interest on capital investment.....	18,743.05
Provision for renewal of generating plant, lines and stations, etc.....	5,492.37
Provision for contingencies.....	1,612.60
Provision for sinking fund:	
By charges against municipalities.....	\$2,715.47
By charges against contracts with private companies which purchased power.....	1,737.43
	<u>4,452.90</u>
	<u>\$49,076.60</u>



RURAL LINES

Ending October 31, 1923

REVENUE:	
Interest and sinking fund collected from the municipalities which operate lines . . .	\$247.70
	<u>\$247.70</u>

EUGENIA SYSTEM RURAL LINES

Statement showing the total Sinking Fund requirements of each Municipality, and the total of the Sinking Fund payments with Interest allowed thereon to October 31, 1923

	Sinking fund requirements which have been paid		Interest at 4% per annum allowed on sinking fund payments	Total sinking fund payments and accumulated interest to October 31, 1923
	Period covered	Amount		
		\$ c.	\$ c.	\$ c.
Flesherton . . . .	6 years ending Oct. 31, 1923	88.47	3.85	92.32
Markdale . . . . .	7 " " " 1923	149.77	9.47	159.24
Ripley . . . . .	2 " " " 1923	4.57	0.08	4.65
Totals . . . . .		242.81	13.40	256.21

SYSTEM

Ending October 31, 1923

REVENUE FOR PERIOD

Collected from municipalities . . . . .	\$42,761.48
Power sold to private companies and the Severn and Eugenia systems . . . .	11,570.74
	<u>\$54,332.22</u>
Deduct:	
Amounts collected from certain municipalities in excess of the sums required to be paid by them for power supplied in the period . . . .	\$6,864.59
Add:	
Amount due by a certain municipality, being the difference between the sum paid and the cost of power supplied to it in the period . . . .	27.96
	<u>6,836.63</u>
Revenue . . . . .	\$47,495.59
Loss on sale of power supplied to private companies (written off to contingency reserve) . . . . .	1,581.01
	<u>\$49,076.60</u>

## WASDELLS

Statement showing the amount to be paid by each Municipality as the Cost, under received by the Commission from each Municipality on account of such cost, upon ascertainment (by annual adjustment) of the actual cost

Municipality	Interim rates per horsepower collected by Commission during year		Share of capital cost of system on which interest and fixed charges are payable	Average horse-power supplied in year after correction for power factor	Share of operating costs		
	To Dec. 31, 1922	To Oct. 31, 1923			Operating maintenance and administrative expenses	Interest	Renewals
	\$ c.	\$ c.	\$ c.		\$ c.	\$ c.	\$ c.
Beaverton.....	52.00	50.00	41,805.88	136.6	3,180.74	2,150.20	624.34
Brechin.....	90.00	85.00	16,595.04	38.3	966.08	854.63	248.16
Cannington.....	65.00	55.00	31,906.59	93.9	2,293.93	1,641.76	476.71
Kirkfield.....	60.00	55.00	13,627.57	27.8	610.64	702.07	203.86
Port Perry.....	90.00	90.00	49,485.59	80.8	2,012.63	2,551.90	740.98
Sunderland.....	85.00	75.00	25,413.56	48.0	1,319.18	1,309.53	380.24
Uxbridge.....	90.00	90.00	52,455.51	81.0	2,103.53	2,705.29	785.52
Woodville.....	80.00	75.00	29,913.78	66.3	1,532.95	1,540.75	447.38
Rural Power Districts—							
Port Perry.....			1,680.94	2.1	68.39	81.05	26.16
Mariposa.....			22,414.55	3.2	164.13	219.49	111.16
Totals—Municipalities.....			285,299.01	578.0	14,252.20	13,756.67	4,044.51
Totals—Companies.....			96,928.75	228.3	4,523.48	4,986.38	1,447.86
Non-operating capital.....							
Grand Totals.....			382,227.76	806.3	18,775.68	18,743.05	5,492.37

## WASDELLS SYSTEM

## Reserve for Renewals Account, October 31, 1923

Total provision for renewals to October 31, 1923.....	\$38,904.86
Deduct:	
Expenditures to October 31, 1922.....	3,340.74
Balance brought forward October 31, 1922.....	\$35,564.12
Added during the year ending October 31, 1923:	
Amounts charged to municipalities as part of the cost of power delivered to them.....	\$4,044.51
Provision against equipment employed in respect of sundry customers.....	1,447.86
Interest at 4% per annum on the monthly balances to the credit of the account.....	1,422.56
	6,914.93
Balance carried forward, October 31, 1923.....	\$42,479.05

## SYSTEM

## COST OF POWER

Section 23 of the Act, of Power supplied to it by the Commission. The amount and the amount remaining to be credited or charged to each Municipality of power supplied to it in the year ending October 31, 1923

and fixed charges		Total cost of power for year as provided to be paid under section 23 of Act	Amounts paid to the Commission by each municipality	Revenue from sale of power to Severn and Eugenia systems	Total revenue	Amounts remaining to be credited or charged to each municipality upon ascertainment of the actual cost of power by annual adjustment		Sinking fund for the years mentioned hereunder charged as part of the cost of power in the year 1922-23
Contingencies	Sinking fund					Credited	Charged	
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	
273.20	749.22	6,977.70	6,870.01	508.57	7,378.58	400.88		1922-23
76.60	297.79	2,443.26	3,281.43	142.59	3,424.02	980.76		1922-23
187.80	572.05	5,172.25	5,337.65	349.60	5,687.25	515.00		1922-23
55.60		1,572.17	1,552.90	103.50	1,656.40	84.23		
161.60		5,467.11	7,272.75	300.82	7,573.57	2,106.46		
96.00	456.29	3,561.24	3,680.22	178.72	3,858.94	297.70		1922-23
162.00		5,756.34	7,293.00	301.58	7,594.58	1,838.24		
132.60	536.86	4,190.54	4,476.49	246.84	4,723.33	532.79		1922-23
4.20	28.23	208.03	308.74	7.82	316.56	108.53		1922-23
6.40	75.03	576.21	536.34	11.91	548.25		27.96	1922-23
1,156.00	2,715.47	35,924.85	40,609.53	2,151.95	42,761.48	6,864.59	27.96	
456.60	1,737.43	13,151.75	10,720.77	849.97	11,570.74		*1,581.01	
1,612.60	4,452.90	49,076.60	51,330.30	3,001.92	54,332.22			

\*NOTE—Transferred to the debit of Contingency Reserve.

## WASDELLS SYSTEM

## Reserve for Contingencies Account, October 31, 1923

Balance brought forward, October 31, 1922.....	\$6,068.13
Added during the year ending October 31, 1923:	
Amounts charged to municipalities as part of the cost of power delivered to them.....	\$1,156.00
Provision against equipment employed in respect of contracts with sundry companies.....	456.60
Interest at 4% per annum on the monthly balance at the credit of the account.....	242.73
	<u>1,855.33</u>
	\$7,923.46
Deduct:	
Loss for the year on power sold to private customers.....	1,581.01
Balance carried forward, October 31, 1923.....	<u>\$6,342.45</u>



## WASDELLS

Statement showing the total Sinking Fund requirements to be met by each Muni Commission under Section 23 of the Act, Sinking Fund payments made the total of such Sinking Fund payments

Municipality	Total sinking fund requirements chargeable to the municipality under the Act		Sinking fund requirements the payment of which has been deferred	
	(a) For period of	(b) Amount	(a) For period of	(b) Amount
		\$ c.		\$ c.
Beaverton.....	4 years ending Oct. 31, 1923	2,594.25		
Brechin.....	4 " " " "	1,541.15		
Cannington.....	4 " " " "	2,176.15		
Kirkfield.....	4 " " " "	673.68	4 years ending Oct. 31, 1923	673.68
Port Perry.....	2 " " " "	964.36	2 " " " "	964.36
Sunderland.....	4 " " " "	1,955.70		
Uxbridge.....	2 " " " "	1,028.85	2 years ending Oct. 31, 1923	1,028.85
Woodville.....	4 " " " "	2,065.52		
Rural Power Districts—				
Port Perry.....	1 " " " "	28.23		
Mariposa.....	1 " " " "	75.03		
Totals—Municipalities.....		13,102.92		2,666.89
Totals—Companies (from commencement of operations).....		10,495.65		
Grand Totals.....		23,598.57		2,666.89

## WASDELLS

Statement showing the net Credit or Charge to each Municipality in respect of power added during the year, also the net amount Credited or Charged to each and the accumulated amount standing as a Credit

Municipality	Date commenced operating	Net credit or charge at October 31, 1922		Cash receipts and payments on account of such credits and charges made during the year	
		Credit	Charge	Credited	Charged
		\$ c.	\$ c.	\$ c.	\$ c.
Beaverton.....	Nov., 1914	1,639.84			1,639.84
Brechin.....	Jan., 1915		2,467.99		
Cannington.....	Nov., 1914		1,204.96	1,204.96	
Kirkfield.....	June, 1920	42.41			42.41
Port Perry.....	Sept., 1922		47.40	47.40	
Sunderland.....	Nov., 1914		1,744.78	33.96	
Uxbridge.....	Sept., 1922		14.11	14.11	
Woodville.....	Nov., 1914		1,154.86	125.80	
Rural Power Districts—					
Port Perry.....	Dec., 1922				
Mariposa.....	Sept., 1923				
Totals.....		1,682.25	6,634.10	1,426.23	1,682.25

SYSTEM

SINKING FUND

cipality, Sinking Fund requirements the payment of which has been deferred by the by certain Municipalities which have been operating more than five years, and including interest allowed thereon to October 31, 1923

Sinking fund requirements paid (or charged) as part of the cost of power		Interest at 4% per annum allowed on sinking fund requirements which have been paid	Total sinking fund payments and accumulated interest to the credit of the municipality on October 31, 1923
(a) For period of	(b) Amount		
4 years ending Oct. 31, 1923	\$ c. 2,594.25	\$ c. 152.42	\$ c. 2,746.67
4 " " " "	1,541.15	102.83	1,643.98
4 " " " "	2,176.15	135.66	2,311.81
4 years ending Oct. 31, 1923	1,955.70	124.98	2,080.68
4 years ending Oct. 31, 1923	2,065.52	123.59	2,189.11
1 " " " "	28.23		28.23
1 " " " "	75.03		75.03
(From commencement of operations).....	10,436.03	639.48	11,075.51
	10,495.65	704.66	11,200.31
	20,931.68	1,344.14	22,275.82

SYSTEM

CREDIT OR CHARGE

supplied to it to October 31, 1922, the cash receipts and payments thereon, interest Municipality in respect of power supplied in the year ending October 31, 1923, or Charge to each Municipality at October 31, 1923

Interest at 4% per annum added during the year		Net amount credited or charged in respect of power supplied in the year ending October 31, 1923		Accumulated amount standing as a credit or charge on October 31, 1923	
Credited	Charged	Credited	Charged	Credit	Charge
\$ c. 35.02	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
	98.72	400.88		435.90	1,585.95
	7.18	980.76		507.82	
0.98		515.00		85.21	
		84.23			
	1.29	2,106.46		2,105.17	
	69.47	297.70			1,482.59
	0.38	1,838.24		1,837.86	
	44.82	532.79			541.09
		108.53		108.53	
			27.96		27.06
36.00	221.86	6,864.59	27.96	5,080.49	3,637.59

## WASDELLS SYSTEM

## Operating Account for Year

Interest on capital investment.....	\$886.41
Provision for sinking fund.....	265.23
	<u>\$1,151.64</u>

## WASDELLS SYSTEM RURAL LINES

Statement showing Interest and Sinking Fund charges on each line for the year ending  
October 31, 1923

	Capital Cost	Interest	Sinking fund	Total interest and sinking fund charges	Revenue from municipalities
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Beaverton.....	6,105.12	375.15	109.83	484.98	484.98
Brechin.....	613.25	38.02	11.04	49.06	49.06
Sunderland.....	3,920.34	233.32	70.56	303.88	303.88
Cannington.....	1,215.60	66.57	21.79	88.36	88.36
Woodville.....	2,889.22	173.35	52.01	225.36	225.36
Non-operating capital.....	247.29				
Totals.....	14,990.82	886.41	265.23	1,151.64	1,151.64

## MUSKOKA

## Operating Account for Year

## COSTS OF OPERATING AS PROVIDED FOR UNDER SECTIONS 6C AND 23 OF THE ACT

Costs of operating and maintaining the generating plant, transmission lines, stations, etc., including the proportion of administrative expenses chargeable to the operation of this system.....	\$12,235.09
Interest on capital investment.....	12,841.01
Provision for renewal of generating plant, lines, stations, etc.....	2,661.88
Provision for contingencies:	
By charges against municipalities.....	\$2,087.70
By appropriating the net profits on power sold to sundry customers at Muskoka Falls.....	25.21
	<u>2,112.91</u>
Provision for sinking fund:	
By charges against municipalities.....	\$3,972.41
By charges against contracts with sundry customers at Muskoka Falls.....	5.11
	<u>3,977.52</u>
	<u>\$33,828.41</u>



RURAL LINES

Ending October 31, 1923

REVENUE:

Interest and sinking fund collected from the municipalities which operate the lines \$1,151.64  
\$1,151.64

WASDELLS SYSTEM RURAL LINES

Statement showing the total Sinking Fund requirements in respect of each line, and the total of the Sinking Fund payments with interest allowed thereon to October 31, 1923

	Sinking fund requirements which have been paid		Interest at 4% per annum allowed on sinking fund payments	Total sinking fund payments and accumulated interest to October 31, 1923
	Period covered	Amount		
		\$ c.	\$ c.	\$ c.
Beaverton....	6 years ending Oct. 31, 1923	504.42	27.88	532.30
Brechin.....	5 " " " 1923	67.26	4.13	71.39
Sunderland...	5 " " " 1923	340.08	19.09	359.17
Cannington...	1½" " " 1923	34.42	.50	34.92
Woodville....	4 " " " 1923	379.86	8.27	188.13
Totals.....		1,126.04	59.87	1,185.91

SYSTEM

Ending October 31, 1923

REVENUE FOR PERIOD

Collected from municipalities.....	\$32,478.80	
Power sold to sundry customers at Muskoka Falls.....	51.00	
		\$32,529.80
Add:		
Amounts due by a certain municipality, being the difference between the sum paid and the cost of power supplied to it during the period.....	\$1,757.29	
Deduct:		
Amounts collected by a certain municipality in excess of the sum required to be paid by it for power supplied in the period.....	458.68	1,298.61
Revenue.....		\$33,828.41
		\$33,828.41

## MUSKOKA

Statement showing the amount to be paid by each Municipality as the Cost, under by the Commission from each Municipality on account of such cost, and ascertainment (by annual adjustment) of the actual cost

Municipality	Interim rates per horsepower collected by Commission during year		Share of capital cost of system on which interest and fixed charges are payable	Average horse-power supplied in year after correction for power factor	Share of operating	
	To Dec. 31, 1922	To Oct. 31, 1923			Operating, maintenance and administrative expenses	Interest
	\$ c.	\$ c.	\$ c.		\$ c.	\$ c.
Gravenhurst.....	20.00	20.00	45,319.95	463.0	3,991.70	2,732.82
Huntsville.....	25.00	25.00	167,494.37	928.8	8,243.39	10,091.06
Totals—Municipalities.....			212,814.32	1,391.8	12,235.09	12,823.88
Muskoka Falls (Sundry Customers).....			284.01			17.13
Non-operating capital.....			2,025.09			
Grand Totals....			215,123.42	1,391.8	12,235.09	12,841.01

## MUSKOKA SYSTEM

## Reserve for Renewals Account, October 31, 1923

Total provision for renewals to October 31, 1922.....	\$16,395.29
Deduct expenditures to October 31, 1922.....	1,180.12
Balance brought forward, October 31, 1922.....	\$15,215.17
Added during the year ending October 31, 1923:	
Amount charged to municipalities as part of the cost of power delivered to them.....	\$2,658.33
Provision against equipment employed in respect of contracts with sundry companies.....	3.55
Interest at 4% per annum on monthly balances to the credit of the account.....	608.61
	3,270.49
Balance carried forward, October 31, 1923.....	\$18,485.66

SYSTEM

COST OF POWER

Section 23 of the Act, of Power supplied to it by the Commission, the amount received the amount remaining to be credited or charged to each Municipality upon of power supplied to it in the year ending October 31, 1923

costs and fixed charges			Total cost of power for year as provided to be paid under Section 23 of Act	Amounts paid to the Commission by each municipality	Amounts remaining to be credited or charged to each municipality upon ascertainment of the actual cost of power by annual adjustment		Sinking fund for the years mentioned hereunder charged as part of the cost of power in the year 1921-22
Renewals	Contingencies	Sinking fund			Credited	Charged	
\$ c. 566.50	\$ c. 694.50	\$ c. 815.76	\$ c. 8,801.28	\$ c. 9,259.96	\$ c. 458.68	.....	1922-23
2,091.83	1,393.20	3,156.65	24,976.13	23,218.84	.....	1,757.29	1921-22
2,658.33	2,087.70	3,972.41	33,777.41	32,478.80	458.68	1,757.29	.....
3.55	.....	5.11	25.79	51.00	*25.21	.....	1922-23
.....	.....	.....	.....	.....	.....	.....	.....
2,661.88	2,087.70	3,977.52	33,803.20	32,529.80	.....	.....	.....

\*NOTE—Transferred to credit of Contingency Reserve.

MUSKOKA SYSTEM

Reserve for Contingencies Account, October 31, 1923

Balance brought forward, October 31, 1922.....	\$3,375.57
Added during the year ending October 31, 1923:	
Amounts charged to municipalities as part of the cost of power delivered to them.....	\$2,087.70
Net profits from contracts with sundry power customers.....	25.21
Interest at 4% per annum on monthly balances at the credit of the account.....	135.02
	2,247.93
Balance carried forward, October 31, 1923.....	\$5,623.50



## MUSKOKA

Statement showing the total Sinking Fund requirements to be met by each Municipality Commission under Section 23 of the Act, Sinking Fund payments made by and the total of such Sinking Fund payments

Municipality	Total sinking fund requirements chargeable to the municipality under the Act		Sinking fund requirements the payment of which has been deferred	
	(a) For period of	(b) Amount	(a) For period of	(b) Amount
Gravenhurst.....	3 years ending Oct. 31, 1923	\$ c. 2,234.80	.....	\$ c. .....
Huntsville.....	3 " " " "	9,238.72	1 year ending Oct. 31, 1923	3,012.23
Totals—Municipalities.....		11,473.52		3,012.23
Totals—Companies (from commencement of operations).....		10.24		
Grand Totals.....		11,483.76		3,012.23

## MUSKOKA

Statement showing the net Credit or Charge to each Municipality in respect of power added during the year, also the net amount Credited or Charged to each and the accumulated amount standing as a

Municipality	Date commenced operating	Net credit or charge at October 31, 1922		Cash receipts and payments on account of such credits and charges made during the year	
		Credit	Charge	Credited	Charged
Gravenhurst.....	Nov., 1915	\$ c. .....	\$ c. 3,784.15	\$ c. 1,070.07	\$ c. .....
Huntsville.....	Sept., 1916	11,534.56	.....	.....	11,534.56
Totals.....	.....	11,534.56	3,784.15	1,070.07	11,534.56

## SYSTEM

## SINKING FUND

pality, Sinking Fund requirements the payment of which has been deferred by the certain Municipalities which have been operating more than five years, including interest allowed thereon to October 31, 1923

Sinking fund requirements paid (or charged) as part of the cost of power		Interest at 4% per annum allowed on sinking fund requirements which have been paid	Total sinking fund payments and accumulated interest to the credit of the municipality on October 31, 1923
(a)	For period of		
	(b) Amount		
	\$ c.	\$ c.	\$ c.
3 years ending Oct. 31, 1923	2,234.80	87.98	2,322.78
2 " " " "	6,226.49	122.79	6,349.28
	8,461.29	210.77	8,672.06
(From commencement of operations).....	10.24	.21	10.45
	8,471.53	210.98	8,682.51

## SYSTEM

## CREDIT OR CHARGE

supplied to it to October 31, 1922, the cash receipts and payments thereon, interest Municipality in respect of power supplied in the year ending October 31, 1923, Charge to each Municipality at October 31, 1923

Interest at 4% per annum added during the year		Net amount credited or charged in respect of power supplied in the year ending October 31, 1923		Accumulated amount standing as a charge on October 31, 1923
Credited	Charged	Credited	Charged	
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
.....	147.48	458.68	.....	2,402.88
229.64	.....	.....	1,757.29	1,527.65
229.64	147.48	458.68	1,757.29	3,930.53

ST. LAWRENCE

Operating Account for Year

COSTS OF OPERATION AS PROVIDED FOR UNDER SECTIONS 6C AND 23 OF THE ACT

Power purchased.....	\$88,109.30
Costs of operating and maintaining the generating plant, transmission lines, stations, etc., including the proportion of administrative expenses chargeable to the operation of this system.....	27,805.29
Interest on capital investment.....	64,635.04
Provision for renewal of lines, stations, etc.....	21,206.16
Provision for contingencies:	
By charges against municipalities.....	\$3,358.65
By charges against contracts with private companies.....	6,589.50
By appropriating the net profit on power sold to private companies.....	6,414.50
	16,362.65
Provision for sinking fund:	
By charges against municipalities.....	\$8,053.25
By charges against contracts with private companies which purchased power.....	7,445.07
	15,498.32
	<u>\$233,616.76</u>

ST. LAWRENCE

Statement showing the amount to be paid by each Municipality as the Cost, under received by the Commission from each Municipality on account of such cost, upon ascertainment (by annual adjustment) of the actual

Municipality	Interim rates per horsepower collected by Commission during year		Share of capital cost of system on which interest and fixed charges are payable	Average horse-power supplied in year after correction for power factor	Cost of power to Commission	Share of operating	
	To Dec. 31, 1922	To Oct. 31, 1923				Operating, maintenance and administrative expenses	Interest
	\$ c.	\$ c.	\$ c.		\$ c.	\$ c.	\$ c.
Alexandria..	80.00	80.00	113,433.77	207.6	2,758.02	1,733.42	7,047.04
Apple Hill...	85.00	85.00	9,599.20	22.3	296.26	407.58	596.22
Brockville...	55.00	40.00	225,733.80	1,306.2	17,353.23	5,247.95	14,000.99
Chesterville..	85.00	65.00	61,357.74	169.7	2,254.52	1,314.20	3,810.37
Lancaster...	97.00	97.00	37,699.31	24.2	321.50	897.97	2,327.06
Martintown..	85.00	75.00	5,378.34	13.1	174.04	352.25	328.29
Maxville....	86.00	86.00	40,538.71	50.0	664.26	684.26	2,519.09
Prescott.....	52.00	45.00	46,532.44	254.1	3,375.79	1,240.20	2,886.51
Williamsburg	95.00	75.00	7,274.22	21.9	290.95	293.47	451.69
Winchester..	85.00	65.00	29,490.74	100.3	1,332.51	1,094.74	1,830.90
Rural Power Districts—							
Brockville.....			16,063.16	31.5	418.49	924.28	994.20
Chesterville.....			3,660.92	3.3	43.84	247.21	225.67
Martintown.....			11,114.16	6.9	91.67	491.25	608.00
Prescott.....			20,929.47	28.0	371.99	944.79	1,294.08
Totals—Municipalities.....			628,805.98	2,239.1	29,747.07	15,873.57	38,920.11
Totals—Companies.....			416,695.89	4,393.0	58,362.23	11,931.72	25,714.93
Non-operating capital.....			122.63				
Grand Totals.....			1,045,624.50	6,632.1	88,109.30	27,805.29	64,635.04



## SYSTEM

ending October 31, 1923

## REVENUE FOR PERIOD

Collected from municipalities.....	\$122,285.92
Power sold to private companies.....	124,730.25
	<u>\$247,016.17</u>
Add:	
Amounts due by certain municipalities, being the difference between sums paid and the costs of power supplied to them in the year..	\$3,233.27
Deduct:	
Amounts collected from certain municipalities in excess of the sums required to be paid by them for power supplied in the year....	16,632.68
	<u>13,399.41</u>
Revenue.....	<u>\$233,616.76</u>
	<u><u>\$233,616.76</u></u>

## SYSTEM

## COST OF POWER

Section 23 of the Act, of Power supplied to it by the Commission, the amount and the amount remaining to be credited or charged to each Municipality cost of power supplied to it in the year ending October 31, 1923

costs and fixed charges			Total cost of power for year as provided to be paid under Section 23 of Act	Amounts paid to the Commission by each municipality	Amounts remaining to be credited or charged to each municipality upon ascertainment of the actual cost of power by annual adjustment.		Sinking fund for the years mentioned hereunder charged as part of the cost of power in the year 1922-23
Renewals	Contingencies	Sinking Fund			Credited	Charged	
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	
2,266.98	311.40		14,116.86	16,612.17	2,495.31		
191.80	33.45		1,525.31	1,792.04	266.73		
4,504.02	1,959.30	4,552.98	47,618.47	55,479.09	7,860.62		1921-22
1,225.77	254.55	1,103.19	9,962.60	11,531.51	1,568.91		1922-23
748.60	36.30		4,331.43	2,343.32		1,988.11	
105.62	19.65		979.85	1,006.16	26.31		
810.37	75.00		4,752.98	4,057.72		695.26	
928.57	381.15	835.72	9,647.94	11,778.85	2,130.91		1922-23
145.30	32.85	127.40	1,341.66	1,704.61	362.95		1921-22
588.99	150.45	530.09	5,527.68	6,896.60	1,368.92		1922-23
377.09	47.25	287.85	3,049.16	3,581.14	531.98		1922-23
108.47	4.95	65.34	695.48	715.52	20.04		1922-23
220.21	10.35	176.02	1,597.50	1,298.50		299.00	1922-23
712.07	42.00	374.66	3,739.59	3,488.69		250.90	1922-23
12,933.86	3,358.65	8,053.25	108,886.51	122,285.92	16,632.68	3,233.27	
8,272.30	6,589.50	7,445.07	118,315.75	124,730.25	*6,414.50		
21,206.16	9,948.15	15,498.32	227,202.26	247,016.17			

\*NOTE—Transferred to the credit of Contingency Reserve.

ST. LAWRENCE SYSTEM

Reserve for Renewals Account, October 31, 1923

Total provision for renewals to October 31, 1922.....	\$72,664.11
Deduct expenditures to October 31, 1922.....	7,920.33
Balance brought forward, October 31, 1922.....	\$64,743.78
Added during the year ending October 31, 1923:	
Amounts charged to municipalities as part of the cost of power delivered to them.....	\$12,933.86
Provision against equipment employed in respect of contracts with sundry companies.....	8,272.30
Interest at 4% per annum on monthly balances to the credit of the account.....	2,589.75
	<u>23,795.91</u>
	\$88,539.69
Expenditures during the year ending October 31, 1923.....	744.34
Balance carried forward, October 31, 1923.....	<u>\$87,795.35</u>

ST. LAWRENCE

Statement showing the total Sinking Fund requirements to be met by each Municipality under Section 23 of the Act, Sinking Fund payments made by and the total of such Sinking Fund payments

Municipality	Total sinking fund requirements chargeable to the municipality under the Act		Sinking fund requirements the payment of which has been deferred	
	(a) For period of	(b) Amount	(a) For period of	(b) Amount
Alexandria.....	3 years ending Oct. 31, 1923	\$ 5,298.74	3 years ending Oct. 31, 1923	\$ 5,298.74
Apple Hill.....	3 " " " "	428.56	3 " " " "	428.56
Brockville.....	4 " " " "	18,629.36	1 " " " "	4,053.62
Chesterville.....	4 " " " "	4,657.20		
Lancaster.....	3 " " " "	1,642.91	3 years ending Oct. 31, 1923	1,642.91
Martintown.....	3 " " " "	238.70	3 " " " "	238.70
Maxville.....	3 " " " "	1,886.80	3 " " " "	1,886.80
Prescott.....	4 " " " "	3,567.43		
Williamsburg.....	4 " " " "	441.09	1 year ending Oct. 31, 1923	130.77
Winchester.....	4 " " " "	2,208.87		
Rural Power Districts—				
Brockville....	2 " " " "	763.54		
Chesterville....	2 " " " "	120.45		
Martintown....	2 " " " "	325.62		
Prescott.....	2 " " " "	473.71		
Totals—Municipalities.....		40,682.98		13,680.10
Totals—Companies (from commencement of operations).....		15,372.05		
Grand Totals.....		56,055.03		13,680.10

ST. LAWRENCE SYSTEM

Reserve for Contingencies Account, October 31, 1923

Balance brought forward, October 31, 1922.....	\$6,255.17
Added during the year ending October 31, 1923:	
Amounts charged to municipalities as part of the cost of power delivered to them.....	\$3,358.65
Provision against equipment employed in respect of contracts with sundry companies.....	6,589.50
Net profits from contracts with sundry power customers.....	6,414.50
Interest at 4% per annum on monthly balances to the credit of the account.....	250.21
	<u>16,612.86</u>
	\$22,868.03
Balance carried forward, October 31, 1923.....	<u><u>\$22,868.03</u></u>

SYSTEM

SINKING FUND

pality, Sinking Fund requirements the payment of which has been deferred by the certain Municipalities which have been operating more than five years, including interest allowed thereon to October 31, 1923

Sinking fund requirements paid (or charged) as part of the cost of power		Interest at 4% per annum allowed on sinking fund requirements which have been paid	Total sinking fund payments and accumulated interest to the credit of the municipality on October 31, 1923
(a) For period of	(b) Amount		
	\$ c.	\$ c.	\$ c.
3 years ending Oct. 31, 1923.....	14,575.74	607.67	15,183.41
4 " " " "	4,657.20	297.64	4,954.84
4 years ending Oct. 31, 1923.....	3,567.43	227.67	3,795.10
3 " " " "	310.32	10.71	321.03
4 " " " "	2,208.87	139.06	2,347.93
2 " " " "	763.54	26.95	790.49
2 " " " "	120.45	2.39	122.84
2 " " " "	325.62	5.99	331.61
2 " " " "	473.71	3.96	477.67
	27,002.88	1,322.04	28,324.92
(From commencement of operations).....	15,372.05	586.37	15,958.42
	42,374.93	1,908.41	44,283.34



## ST. LAWRENCE

Statement showing the net Credit or Charge to each Municipality in respect of power year, also the net amount Credited or Charged to each Municipality in respect amount standing as a Credit or Charge

Municipality	Date commenced operating	Net credit or charge at October 31, 1922		Cash payments on account of such credits during the year
		Credit	Charge	Charged
		\$ c.	\$ c.	\$ c.
Alexandria.....	Jan., 1921		3,805.05	
Apple Hill.....	April, 1921		366.06	
Brockville.....	April, 1915	17,059.47		17,059.47
Chesterville.....	April, 1914	1,446.42		1,446.42
Lancaster.....	May, 1921		3,180.01	
Martintown.....	May, 1921	165.97		165.97
Maxville.....	Feb., 1921		2,531.53	
Prescott.....	Dec., 1913	2,867.18		2,786.30
Williamsburg.....	April, 1915	61.28		61.28
Winchester.....	Jan., 1914	3,511.74		2,277.00
Rural Power Districts—				
Brockville.....	July, 1922	778.36		
Chesterville.....	May, 1922		56.27	
Martintown.....	Jan., 1922		578.16	
Prescott.....	June, 1922	54.62		
Totals.....		25,945.04	10,517.08	23,796.44

## RIDEAU

## Operating Account for Year

## COSTS OF OPERATING AS PROVIDED FOR UNDER SECTIONS 6C AND 23 OF THE ACT

Power purchased.....	\$5,333.72
Costs of operating and maintaining the generating plant, transmission lines, stations, etc., including the proportion of administrative expenses chargeable to the operation of this system.....	36,038.10
Interest on capital investment.....	72,546.82
Provision for renewal of generating plant, lines, stations, etc.....	10,817.76
Provision for contingencies:	
By charges against municipalities.....	\$3,587.70
By charges against contracts with private company, which purchased power.....	641.55
By appropriating the net profit on power sold to private company..	647.64
	4,876.89
	<u>\$129,613.29</u>

SYSTEM

CREDIT OR CHARGE

supplied to it to October 31, 1922, the cash payments, and interest added during the of power supplied in the year ending October 31, 1923, and the accumulated to each Municipality at October 31, 1923

Interest at 4% per annum added during the year		Net amount credited or charged in respect of power supplied in the year ending October 31, 1923		Accumulated amount standing as a credit or charge on October 31, 1923	
Credited	Charged	Credited	Charged	Credit	Charge
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
.....	152.20	2,495.31	.....	.....	1,461.94
.....	14.62	266.73	.....	.....	113.95
300.28	.....	7,860.62	.....	8,160.90	.....
42.15	.....	1,568.91	.....	1,611.06	.....
.....	127.20	.....	1,988.11	.....	5,295.32
4.94	.....	26.31	.....	31.25	.....
.....	101.26	.....	695.26	.....	3,328.05
95.75	.....	2,130.91	.....	2,307.54	.....
1.74	.....	362.95	.....	364.69	.....
102.56	.....	1,368.92	.....	2,706.22	.....
.....	.....	.....	.....	.....	.....
31.13	.....	531.98	.....	1,341.47	.....
.....	2.25	20.04	.....	.....	38.48
.....	23.13	.....	299.00	.....	900.29
2.18	.....	.....	250.90	.....	194.10
.....	.....	.....	.....	.....	.....
580.73	420.66	16,632.68	3,233.27	16,523.13	11,332.13

SYSTEM

ending October 31, 1923

REVENUE FOR PERIOD

Collected from municipalities.....	\$105,033.40
Power sold to private company.....	18,777.41
	<u>\$123,810.81</u>
Add:	
Amounts due by certain municipalities, being the difference between sums paid and the costs of power supplied to them in the year..	\$5,859.58
Deduct:	
Amounts collected from certain municipalities in excess of the sums required to be paid by them for power supplied in the year....	57.10
	<u>5,802.48</u>
Revenue.....	<u>\$129,613.29</u>

## RIDEAU

Statement showing the amount to be paid by each Municipality as the Cost, received by the Commission from each Municipality on account of such cost, upon ascertainment (by annual adjustment) of the actual

Municipality	Interim rates per horsepower collected by Commission during year		Share of capital cost of system on which interest and fixed charges are payable	Average horsepower supplied in year after correction for power factor	Cost of power to Commission
	To Dec. 31, 1922	To Oct. 31, 1923			
	\$ c.	\$ c.	\$ c.		\$ c.
Carleton Place.....	44.00	44.00	320,585.51	796.9	1,507.52
Kemptville.....	80.00	60.00	50,899.50	94.9	179.53
Lanark.....	92.50	75.00	22,253.56	32.5	61.48
Perth.....	45.00	45.00	215,774.12	526.5	995.99
Smiths Falls.....	40.00	40.00	322,432.98	941.0	1,780.11
Totals—Municipalities.....			931,945.67	2,391.8	4,524.63
Totals—Companies.....			150,330.86	427.7	809.09
Non-operating capital.....			802.68		
Grand Totals.....			1,083,079.21	2,819.5	5,333.72

## RIDEAU SYSTEM

## Reserve for Renewals Account, October 31, 1923

Total provision for renewals to October 31, 1922.....	\$33,884.43
Deduct expenditures to October 31, 1922.....	113.43
Balance brought forward, October 31, 1922.....	\$33,771.00
Added during the year ending October 31, 1923:	
Amounts charged to municipalities as part of the cost of power delivered to them.....	\$9,315.21
Provision against equipment employed in respect of contracts with sundry companies.....	1,502.55
Interest at 4% per annum on monthly balances to the credit of the account.....	1,350.84
	12,168.60
Expenditures during the year ending October 31, 1923.....	\$45,939.60
Balance carried forward October 31, 1923.....	\$45,410.37



## SYSTEM

## COST OF POWER

under Section 23 of the Act, of Power supplied to it by the Commission, the amount and the amount remaining to be credited or charged to each Municipality cost of power supplied to it in the year ending October 31, 1923

Share of operating costs and fixed charges				Total cost of power for year as provided to be paid under Section 23 of Act	Amounts paid to the Commission by each municipality	Amounts remaining to be credited or charged to each municipality upon ascertainment of the actual cost of power by annual adjustment	
Operating maintenance and administrative expenses	Interest	Renewals	Contingencies			Credited	Charged
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
9,960.29	21,489.84	3,204.44	1,195.35	37,357.44	35,062.54	.....	2,294.90
1,789.21	3,412.31	508.83	142.35	6,032.23	6,089.33	57.10	.....
744.07	1,492.00	222.47	48.75	2,568.77	2,547.45	.....	21.32
6,678.86	14,464.13	2,156.81	789.75	25,085.54	23,692.33	.....	1,393.21
11,765.59	21,612.04	3,222.66	1,411.50	39,791.90	37,641.75	.....	2,150.15
30,938.02	62,470.32	9,315.21	3,587.70	110,835.88	105,033.40	57.10	5,859.58
5,100.08	10,076.50	1,502.55	641.55	18,129.77	18,777.41	*647.64	.....
.....	.....	.....	.....	.....	.....	.....	.....
36,038.10	72,546.82	10,817.76	4,229.25	128,965.65	123,810.81	.....	.....

\*NOTE—Transferred to credit of Contingency Reserve.

## RIDEAU SYSTEM

## Reserve for Contingencies Account, October 31, 1923.

Balance brought forward, October 31, 1922.....	\$7,673.25
Added during the year ending October 31, 1923:	
Amounts charged to municipalities as part of the cost of power delivered to them.....	\$3,587.70
Provision against equipment employed in respect of contracts with sundry companies.....	641.55
Net profits from contracts with sundry power customers.....	647.64
Interest at 4% per annum on monthly balances to the credit of the account.....	306.93
	<u>5,183.82</u>
	\$12,857.07
Deduct:	
Expenditures for the year ending October 31, 1923.....	1,200.00
Balance carried forward, October 31, 1923.....	<u>\$11,657.07</u>

## RIDEAU

Statement showing the net Credit to each Municipality in respect of power supplied year, also the net amount Credited or Charged to each Municipality in respect amount standing as a Credit or Charge

Municipality	Date commenced operating	Net credit or charge at October 31, 1922	Cash payments on account of such credits during the year
		Credit	Charge
		\$ c.	\$ c.
Carleton Place.....	May, 1919	11,191.91	11,191.91
Kemptville.....	Dec., 1921	2,446.38	2,446.38
Lanark.....	Sept., 1921	941.89	941.89
Perth.....	Feb., 1919	4,094.67	4,094.67
Smiths Falls .....	Sept., 1918	11,829.93	11,829.93
Totals.....		30,504.78	30,504.78

## THUNDER BAY

Statement showing the Cost of Operation, Administration and Interest and the amount horsepower in the year ending October 31, 1923; also the balance of the year's Arthur and other power

Municipality	Rate per horsepower charged during the year	Capital cost of system as at October 31, 1923	Average horsepower supplied in year after correction for power factor
Port Arthur.....	\$21.00	\$6,526,859.72	\$13,353.51
Non-operating capital.....		337,365.90	
		\$6,864,225.62	

SYSTEM

CREDIT OR CHARGE

to it to October 31, 1922, the cash payments, and interest added during the of power supplied in the year ending October 31, 1923, and the accumulated to each Municipality at October 31, 1923

Interest at 4% per annum added during the year		Net amount credited or charged in respect of power supplied in the year ending October 31, 1923		Accumulated amount standing as a credit or charge on October 31, 1923	
Credited	Charged	Credited	Charged	Credit	Charge
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
268.00	.....	57.10	.....	113.97	.....
56.87	.....		21.32	0.68	.....
22.00	.....		1,393.21		1,295.02
98.19	.....		2,150.15		1,899.17
250.98	.....				
696.04	.....	57.10	5,859.58	114.65	5,221.09

SYSTEM

charged the City of Port Arthur for power delivered at the interim rate of \$21.00 per Interest remaining to be collected out of future Revenues from the City of Port customers of the System

Operating, maintenance and administration expenses	Amount charged to city of Port Arthur	Excess of revenue over operating, maintenance and administration expenses	Interest	Balance of interest deferred and collectible out of future revenue
\$66,943.06	\$280,423.71	\$213,480.65	\$406,611.92	\$193,131.27



## THUNDER BAY SYSTEM

Statement showing amount of Interest deferred and collectible out of future Revenue from the City of Port Arthur and other power customers on the System as at October 31, 1923

Amount of interest deferred as per operating statements for the two years ending October 31, 1922	Additional interest deferred because of adjustments made in the last fiscal year.	Amount deferred as per operating statement for the year ending October 31, 1923	Total interest deferred as at October 31, 1923
\$318,320.65	\$109,366.41	\$193,131.27	\$620,818.33

## CENTRAL ONTARIO AND TRENT SYSTEM AND NIPISSING SYSTEM

The following balance sheet and operating account relate to the systems known as "Central Ontario and Trent" and "Nipissing" which together serve electrical energy to fifty-seven municipalities and companies. The Central Ontario and Trent system extends from the municipality of Whitby on the west to and including the city of Kingston on the east and as far north as Lindsay. The Nipissing system supplies the town of North Bay and vicinity. These systems were purchased by the provincial Government, as at the 1st of March, 1916, from the Electric Power Company, Limited, which owned or controlled the capital stock of twenty-two subsidiary companies, the purchase price being the sum of \$8,350,000, payable in ten years, secured by a government bond issue bearing interest at four per cent per annum.

Since the acquisition of these properties, and their transfer to the Commission to operate in trust for the Government, it has been found necessary to enlarge, extend and improve the systems to meet the increasing demands for electrical service.

The Central Ontario system and the Trent system both receive their electrical energy from the same sources of power supply through the same main transmission network, and from the standpoint of power development and electrical operation are regarded as a unit and now known as the Central Ontario and Trent system. It may be explained that after the Central Ontario system was purchased by the Provincial Government, a number of municipalities in Central Ontario, from time to time, applied to the Hydro-Electric Power Commission for power to be supplied under the provisions of the Power Commission Act. The municipalities in central Ontario which thus enter into direct relationship with the Hydro-Electric Power Commission are for purposes of financial administration grouped in what is termed the "Trent" system.

The operation of these two systems—the "Central Ontario and Trent" and the "Nipissing"—entails the generation, transformation and transmission of electrical energy to thirty-seven municipalities and twenty companies, and in addition thereto the operation of three gas plants—at Peterborough, Oshawa and Cobourg—the Cobourg waterworks, the Peterborough street railway, the Campbellford pulp mill and certain pulpwood limits connected therewith.

With the exception of sixteen municipalities, namely, Bloomfield, Havelock, Kingston, Kingston Rural District, Lakefield, Madoc, Marmora, Norwood, Omemee, Oshawa Rural District, Peterborough, Picton, Stirling, Warkworth, Wellington and Whitby, fourteen of which were connected to the system subsequent to the date of purchase, and constitute the Trent system, the whole property, local and otherwise, is operated and maintained by the Commission. Although the ownership of the whole plant is vested in the province (except the sixteen local systems of the municipalities mentioned) precisely the same methods, with respect to the control of rates, operation, maintenance, and provision for renewal of plant and equipment, are applied, as appertain to the other systems controlled and operated by the Commission.

An annual adjustment of the system's capital cost and expenses is made and those municipalities operating their own utilities and which have contracts for power to be supplied at cost, receive an additional charge or credit—as the case may be—on account of power cost as ascertained by this adjustment, just as is done in the case of the municipalities comprising the Niagara system and other systems.

## CENTRAL ONTARIO

## (ALSO NIPISSING)

## Operated by the Hydro-Electric

## Statements of Assets and

## ASSETS

Central Ontario:			
Power developments and hydraulic rights .....	\$6,321,233.77		
Transformer stations.....	699,260.73		
Transmission lines.....	1,591,454.01		
			\$8,611,948.51
Service buildings.....			17,477.57
Local Utilities—electric, gas, water and street railway.....			2,645,334.56
Nipissing:			
Power development and standby plant.....	\$555,674.41		
Transformer stations.....	36,281.35		
Transmission lines.....	45,048.09		
			637,003.85
Service buildings.....			5,924.80
Local Utilities—electric.....			205,479.11
Rural lines.....			32,168.95
Pulpmill and pulpwood areas.....			536,615.16
			\$12,691,952.51
Sinking Fund:			
Invested in securities of the Province of Ontario—par value \$43,000.00.....	\$43,000.00		
Interest accrued thereon.....	985.42		
			43,985.42
Investments:			
Reserve Funds—Invested in securities of the Dominion of Canada (par value \$700,000.00).....	\$700,000.00		
Interest accrued thereon.....	14,750.00		
Debentures of the town of Trenton re sale of waterworks....	19,253.46		
Debentures of the town of Napanee re sale of property and water privileges.....	12,499.15		
Interest accrued thereon.....	1,231.27		
			747,733.88
Premium on bond investments.....			14,468.20
Inventories:			
Tools and equipment.....	\$64,461.62		
Material and supplies.....	273,915.19		
			338,376.81
Accounts Receivable:			
Power and pulp mills accounts.....	\$131,290.19		
Consumers' supply—sales accounts.....	21,706.23		
Consumers' light and power accounts.....	38,592.19		
	\$191,588.61		
Less: Reserve for doubtful accounts.....	6,070.95		
			185,517.66
Advances to contractors, in respect of pulpwood operations.....			10,308.93
Balances due by certain municipalities in respect of the costs of power supplied to them as provided to be paid under their contracts with the Commission..			41,260.75
Due by municipalities in respect of the operation of rural lines.....			7,135.20
Cash in banks.....			1,843.89
Hydro-Electric Power Commission of Ontario—cash held on deposit for account of this System.....			871.85
Expenses and insurance prepaid.....			24,813.47
Deferred maintenance—re-insulation of transmission lines chargeable to future operations.....			14,330.63
Operating deficit.....			122,679.95
			<u>\$14,245,279.15</u>



## AND TRENT SYSTEM

## SYSTEM)

## Power Commission of Ontario

## Liabilities, October 31, 1923

## LIABILITIES

Provincial Treasurer:		
Purchase price of System.....	\$8,350,000.00	
Debentures issued in connection with purchase of Bruton Township pulpwood area.....	225,000.00	
Cash advances.....	4,136,858.78	\$12,711,858.78
Accounts payable and accrued charges.....	\$17,876.78	
Consumers' deposits.....	16,390.26	
Unearned water rates.....	2,480.00	
		36,747.04
Discount on bond investments.....		2,910.00
Balances due to certain Municipalities in respect of amounts paid by them in excess of the cost of power supplied to them as provided to be paid under their contracts with the Commission.....		4,552.17
Due to certain Municipalities in respect of the operation of rural lines.....		415.16
Reserve for renewals.....		1,327,506.25
Reserve for contingencies.....		115,115.54
Reserve for sinking fund:		
For retirement of bonds in purchase of Bruton Township pulpwood areas.....	\$38,008.04	
For repayment of cost of mill at Bancroft.....	5,152.49	
In respect of rural lines.....	3,013.68	
		46,174.21

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\$14,245,279.15

## CENTRAL ONTARIO

## (ALSO NIPISSING)

## Operating Account for Year

## COST OF OPERATIONS

## Power Department:

Power purchased.....	\$16,229.08	
Cost of operating and maintaining generating plants, transmission lines, stations, etc., including rentals of water powers, and the proportion of administrative expenses chargeable to the operation of the Power Department.....	439,329.26	
Interest on capital investment.....	473,366.57	
Provision for renewal of generating plants, lines, stations, etc....	80,618.03	
Provision for contingencies.....	78,441.20	
		<u>\$1,087,984.14</u>

## Utilities:

Cost of operating and maintaining electric light distribution systems, gas systems, water system and the Peterboro Street Railway, including all materials and supplies purchased and the proportion of administrative expenses chargeable to the operation of these Utilities.....	\$432,179.24	
Interest on capital investment.....	146,111.35	
Provision for renewal of plants and equipment.....	47,884.45	
		<u>626,175.04</u>

## Total cost of operation of Power Department and Utilities.....

\$1,714,159.18

## Cost of operating Rural Lines, including power supplied, operating expenses, interest, renewals and sinking fund.....

10,600.75

## Net loss for year on operation of Pulp Mill, and Bruton Township Pulpwood Areas.....

15,892.81

\$1,740,652.74

## Net operating surplus for year.....

32,439.59

\$1,773,092.33

## Surplus

## Debit balance brought forward, October 31, 1922.....

\$155,119.54

\$155,119.54

# AND TRENT SYSTEM SYSTEM)

Ending October 31, 1923

## REVENUE

Power sold to private companies and certain municipalities.....	\$308,689.49	
Power supplied to certain other municipalities at cost in accordance with their contracts with the Commission.....	166,621.96	
Power supplied at cost to the Peterboro Street Railway, and the Campbellford Pulp Mill.....	57,099.29	
		\$532,410.74
Light and power sold to consumers on the twenty electric light distribution systems.....		861,144.91
Gas sold to consumers on three gas systems and sales of by-products.		218,081.90
Water sold to consumers on one water system.....		37,073.87
Revenue from Peterboro Street Railway.....		86,823.68
		<hr/>
Total revenue from Power Department and Utilities.....		\$1,735,535.10
Revenue from the operation of Rural Lines, less the balances credited to the municipalities under their contracts with the Commission.		10,600.75
Net profit on sales of equipment and supplies.....		26,956.48

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\$1,773,092.33

## Account

Net operating surplus for the year ending October 31, 1923.....	\$32,439.59
Balance, as shown on statement of Assets and Liabilities.....	122,679.95
	<hr/>
	\$155,119.54



## CENTRAL ONTARIO

Statement showing the amount to be paid by each of the following Municipalities received by the Commission from each Municipality on account of such ascertainment, by annual adjustment, of the actual cost of power

Municipality	Interim rates per horse-power collected by Commission during year	Share of capital cost of system on which interest and fixed charges are payable	Average horse-power supplied in year after correction for power factor	Share of operating	
				Operating, maintenance and administrative expenses	Interest
	\$ c.	\$ c.		\$ c.	\$ c.
Bloomfield.....	72.50	33,871.62	60.9	925.14	1,777.40
Havelock.....	65.00	31,866.46	68.8	1,505.11	1,679.26
Lakefield.....	45.00	46,921.95	108.8	1,319.77	2,461.81
Marmora.....	35.00	15,129.64	44.7	702.60	794.12
Norwood.....	38.00	23,833.45	87.2	1,620.09	1,254.55
Peterboro.....	22.50	949,699.36	4,738.9	45,302.74	49,695.36
Pictou.....	52.00	167,404.57	364.8	4,899.19	8,786.83
Warkworth.....	85.51	7,289.02	2.2	265.89	49.23
Wellington.....	50.00	32,962.61	77.9	1,010.82	1,728.66
Whitby.....	29.00	129,383.16	583.1	6,237.59	6,774.74
Totals.....		1,438,361.84		63,788.94	75,001.96

## RURAL

District	Capital cost	Cost of power	Operating, maintenance and administrative expense
	\$ c.	\$ c.	\$ c.
OSHAWA RURAL DISTRICT.....	35,646.53*	2,122.15	2,666.23
KINGSTON RURAL DISTRICT.....	14,694.76	475.12	269.27

\*Includes \$18,179.85 invested by townships.

## AND TRENT SYSTEM

## COST OF POWER

as the Cost of Power supplied to it under its contract with the Commission, the amount cost, and the amount credited or charged to each Municipality upon supplied to it in the year ending October 31, 1923

costs and fixed charges		Total cost of power for year as provided to be paid under contracts	Amount paid to the Commission by each municipality	Amount credited or charged to each municipality upon ascertaining the cost of power by annual adjustment	
Renewals	Contingencies			Credited	Charged
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
374.29	121.80	3,198.63	4,413.39	1,214.76	.....
344.67	137.60	3,666.64	4,469.79	803.15	.....
499.01	217.60	4,498.19	4,897.55	399.36	.....
153.32	89.40	1,739.44	1,565.63	.....	173.81
229.06	174.40	3,278.10	3,311.97	33.87	.....
8,052.35	9,477.80	112,528.25	106,624.56	.....	5,903.69
1,799.71	729.60	16,215.33	18,968.75	2,753.42	.....
9.81	4.40	329.33	192.29	.....	137.04
349.19	155.80	3,244.47	3,896.21	651.74	.....
1,147.78	1,166.20	15,326.31	16,910.39	1,584.08	.....
12,959.19	12,274.60	164,024.69	165,250.53	7,440.38	6,214.54

## LINES

Fixed charges			Instalments paid on bonds issued by townships	Total cost of power, operating expenses and fixed charges	Revenue from consumers	Amount remaining to be credited to the municipalities
Interest	Renewals	Sinking fund				
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
2,696.26	1,003.02	305.56	592.82	8,986.04	11,133.08	2,147.04
548.12	203.94	118.26	.....	1,614.71	2,029.87	415.16

**CENTRAL ONTARIO AND TRENT SYSTEM  
(ALSO NIPISSING SYSTEM)**

**Reserve for Renewals Account, October 31, 1923**

Total provision for renewals to October 31, 1922.....	\$1,247,239.64
Deduct:	
Expenditures to October 31, 1922.....	67,317.39
Balance brought forward, October 31, 1922.....	<u>\$1,179,922.25</u>
Added during the year ending October 31, 1923:	
By charges against operations.....	\$132,708.81
Interest at 4% per annum on the monthly balances to the credit of the account.....	47,164.33
	<u>179,873.14</u>
	<u>\$1,359,795.39</u>
Deduct:	
Expenditures during the year ending October 31, 1923.....	32,289.14
Balance carried forward, October 31, 1923.....	<u><u>\$1,327,506.25</u></u>

**CENTRAL ONTARIO**

**Statement showing the net Credit or Charge to each Municipality in respect of power  
added during the year, also the net amount credited or charged to each  
and the accumulated amount standing as a credit**

Municipality	Date commenced operating	Net credit or charge October 31, 1922		Cash receipts and payments on account of such credits and charges made during the year	
		Credit	Charge	Credited	Charged
Bloomfield.....	April, 1919	\$ c.	\$ c.	\$ c.	\$ c.
Havelock.....	Feb., 1921	366.81	856.14		366.81
Lakefield.....	Aug., 1920		566.06	43.81	
Marmora.....	Jan., 1921		462.40	462.40	
Norwood.....	Feb., 1921		29.18	15.34	
Peterboro.....	Mar., 1916		32,728.35		
Picton.....	April, 1919	3,278.44			3,278.44
Warkworth.....	Oct., 1923				
Wellington.....	April, 1919	633.40			633.40
Whitby.....	Mar., 1916		2,354.84		
Totals.....		4,278.65	36,996.97	521.55	4,278.65

**RURAL**

OSHAWA RURAL DISTRICT— Whitby Township, East Whitby Township, Pickering Township. }	April, 1918	8,925.23			
KINGSTON RURAL DISTRICT..	Jan., 1923				



## CENTRAL ONTARIO AND TRENT SYSTEM (ALSO NIPISSING SYSTEM)

### Reserve for Contingencies Account, October 31, 1923

Balance brought forward, October 31, 1922.....		\$38,058.00
Added during the year ending October 31, 1923:		
By charges against operations.....	\$78,441.20	
Interest at 4% per annum on the monthly balances to the credit of the account.....	1,479.68	
		<u>79,920.88</u>
		\$117,978.88
Deduct:		
Expenditures to cover contingencies met with during the year ending October 31, 1923.....		2,863.34
Balance carried forward, October 31, 1923.....		<u>\$115,115.54</u>

## AND TRENT SYSTEM

## CREDIT OR CHARGE

supplied to it to October 31, 1922, the cash receipts and payments thereon, and interest Municipality in respect of power supplied in the year ending October 31, 1923, or charge to each Municipality at October 31, 1923

Interest at 4% per annum added during the year		Net amount credited or charged in respect of power supplied in the year ending October 31, 1923		Accumulated amount standing as a credit or charge on October 31, 1923	
Credited	Charged	Credited	Charged	Credit	Charge
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
.....	34.24	1,214.76	.....	324.38	.....
.....	.....	803.15	.....	803.15	.....
.....	20.89	399.36	.....	.....	143.78
.....	.....	.....	173.81	.....	173.81
.....	.55	33.87	.....	19.48	.....
.....	1,309.13	.....	5,903.69	.....	39,941.17
.....	.....	2,753.42	.....	2,753.42	.....
.....	.....	.....	137.04	.....	137.04
.....	.....	651.74	.....	651.74	.....
.....	94.19	1,584.08	.....	.....	864.95
.....	1,459.00	7,440.38	6,214.54	4,552.17	41,260.75

LINES

	357.01	2,147.04			7,135.20
			415.16	415.16	

## THOROLD

## Statement of Assets and

## ASSETS

Transmission and distribution system, contracts, franchises and goodwill.....	\$102,094.82
Due by consumers in respect of power accounts.....	9,362.94
Hydro-Electric Power Commission of Ontario:	
Cash belonging to this system in hands of the Commission.....	87,552.63

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\$199,010.39

## THOROLD

## Operating Account for Year

## COST OF OPERATION

Power purchased.....	\$30,218.41
Cost of operating and maintaining transmission lines, and stations, including proportion of administrative expenses chargeable to this system.....	1,474.89
Interest.....	4,111.03
Provision for renewal of lines and stations.....	978.85
Provision for sinking fund:	
For repayment of purchase price of system.....	\$1,940.25
Collected from municipality of Thorold as part of the cost of power delivered to it.....	134.10
	<hr/> 2,074.35
	\$38,857.53
Operating profit for year.....	102.85
	<hr/> <hr/> \$38,960.38

## THOROLD

## Surplus

Appropriated for the purpose of providing sinking fund for repayment of the purchase price of the system.....	<hr/> <hr/> \$102.85
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## SYSTEM

## Liabilities, October 31, 1923

## LIABILITIES

Hydro-Electric Power Commission of Ontario:	
Bonds issued to cover purchase price.....	\$100,000.00
Balance due to the municipality of Thorold in respect of amount paid by it to October 31, 1922, in excess of the cost of power supplied to it as provided to be paid under its contract with the Commission.....	1,371.51
Reserve for sinking fund.....	92,565.07
Reserve for renewals.....	5,073.81
	<u>\$199,010.39</u>

## SYSTEM

## Ending October 31, 1923

## REVENUE FOR PERIOD

Power sold to private companies.....	\$33,602.69
Proportionate share of expense chargeable to the municipality of Thorold trans- ferred to Niagara system.....	895.13
	<u>\$34,497.82</u>
Commissions (or royalties) received from the Ontario Power Company of Niagara Falls on power sold by it to power customers in Thorold district.....	4,462.56
	<u>\$38,960.38</u>

## SYSTEM

## Account

Operating profit for year.....	<u>\$102.85</u>
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## ESSEX COUNTY

## Statement of Assets and

## ASSETS

Transmission lines, transformer stations and local distribution systems.		\$395,432.06	
Furniture and Equipment:			
Office furniture.....	\$1,004.87		
Motor trucks.....	1,286.67		
Tools.....	741.21		
			3,032.75
Materials and Supplies.....			14,071.34
Accounts Receivable:			
Consumers accounts—power and light.....	\$1,339.01		
Consumers accounts—sundry supplies.....	1,102.08		
Mortgage receivable on property sold.....	910.50		
Refund receivable, re defective equipment.....	484.67		
		\$3,836.26	
Less reserve for doubtful account ..	250.00		
			3,586.26

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\$416,122.41

## ESSEX COUNTY

## Operating Account for Year

## COST OF OPERATION

Power purchased.....	\$37,255.77
Cost of operating and maintaining transmission lines, stations and distribution systems, including the proportion of administrative expense chargeable to the operation of the system.....	32,586.52
Interest on capital investment.....	18,202.23
Provision for renewal of lines, stations and distribution systems.....	7,834.06
Provision for sinking fund.....	7,210.95
Total cost of operation.....	\$103,089.53
Operating profit for year.....	39,365.88
	<u>\$142,455.41</u>

## SYSTEM

## Liabilities, October 31, 1923

## LIABILITIES

Hydro-Electric Power Commission of Ontario:		
Bonds issued to cover purchase price.....	\$226,000.00	
Cash advances from the Province of Ontario.....	62,000.00	
Cash advances from the renewal and other reserve funds in the hands of the Commission.....	46,627.20	
	<u>\$334,627.20</u>	
Less sinking fund on deposit therewith.....	36,879.19	
		<u>\$297,748.01</u>
Accounts payable.....	\$22.35	
Consumers deposits.....	2,555.11	
		<u>2,577.46</u>
Reserve for sinking fund.....		36,879.19
Reserve for renewals.....		56,727.82
Operating Surplus:		
Net profit for the year ending October 31, 1923.....	\$39,365.88	
Less:		
Deficit brought forward, October 31, 1922.....	\$3,578.32	
Sinking fund on extensions and betterments, 1918 to 1922.....	8,315.62	
Loss on sale of 60-cycle equipment.....	5,282.01	
	<u>17,175.95</u>	
Net Surplus.....		<u>22,189.93</u>
		<u><u>\$416,122.41</u></u>

## SYSTEM

## Ending October 31, 1923

## REVENUE FOR PERIOD

Sales of power and light.....	\$140,585.41
Profit on sales and supplies.....	1,870.00

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\$142,455.41

## THE ONTARIO POWER COMPANY OF NIAGARA FALLS AND THE TORONTO POWER COMPANY, LIMITED

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### Financial Statements

October 31, 1923

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**The Ontario Power Company of Niagara Falls**, including the Ontario Transmission Company, Limited, were purchased by the Commission under the authority of the Legislature (7 Geo. V, Cap. 20).

The agreement provided for the purchase by the Hydro-Electric Power Commission of the stock of the Ontario Power Company and its auxiliary, the Ontario Transmission Company, Limited, for the sum of \$8,000,000 in forty-year, four per cent bonds of the Commission, guaranteed by the Province, and the assumption of the bonded indebtedness of the Corporation.

The statements submitted herewith show the Balance Sheet as of October 31, 1923, the Operating Report for the year ending on that date, and a digest of the Appropriation Account showing the distribution of the surplus earnings, and the net surplus transferred to the balance sheet.

The Operating Statement for the year ending October 31, 1923, shows a surplus of \$631,746.13, after providing for all costs of operation, exchange, discount on bonds, bond and other interest charges, and an adequate yearly provision for renewal of the plant. This sum is augmented by the credit balance brought forward from 1922 and the surplus arising from bond redemption during the year. Thus there is a surplus balance of \$733,119.43, which has been appropriated to meet interest, exchange, and sinking fund requirements in respect to the bonds issued by the Commission in purchase of capital stock of the Company, and also to provide the sinking fund requirements in respect to the other bond issues, leaving a net surplus of \$98,543.03.

**The Toronto Power Company, Limited**, and its subsidiaries, The Electrical Development Company of Ontario, Limited, and Toronto and Niagara Power Company, were purchased by the Commission (as at December, 1920) under Legislative authority and by virtue of an agreement consummated under date of August 15, 1922, between the Toronto Railway Company—Vendor—and the Hydro-Electric Power Commission of Ontario—Purchaser.

The agreement provides for the purchase by the Hydro-Electric Power Commission of Ontario of the whole of the capital stock issued and outstanding and the assumption of the bonded indebtedness of the Companies.

The Balance Sheet as at October 31, 1923, and the Operating Report for the twelve months ending October 31, 1923, are submitted herewith.

The Operating statement shows a surplus of \$222,317.17, after providing for all costs of operation and maintenance, etc., bond interest, and an adequate provision for renewal of the plant. This sum is augmented by the credit balance



brought forward from 1922 and the surplus arising from bond redemption and exchange profits during the year. Thus there is a surplus balance of \$397,210.80, which has been appropriated to meet interest and sinking fund requirements in respect to the bonds issued by the Commission in purchase of capital stock of the Companies and also to provide the sinking fund requirements in respect to the other bond issues, leaving a net surplus of \$137,110.47.

Up to the present time these properties have been operated in conjunction with the Niagara system, but as separate units. In the year 1924 these properties will be transferred to the Hydro-Electric Power Commission of Ontario (see the Power Commission and Companies' Transfer Act, 1924) and will become an integral part of the Niagara system.

## THE ONTARIO POWER COMPANY OF NIAGARA FALLS AND

## Balance Sheet

## ASSETS

Plant, real estate, transmission lines, distributing stations and rights, franchises and goodwill. ....	\$25,140,169.73	
Third pipe line to power plant, including additional generating equipment. ....	3,516,524.29	\$28,656,694.02
Discount on bonds capitalized, less amounts written off, \$803,933.99. ....	\$887,451.92	
American exchange on remittance to retire 1921 bonds, less amounts written off, \$42,114.77. ....	316,012.93	1,203,464.85
Construction equipment. ....	\$4,593.15	
Maintenance, tools and equipment. ....	24,601.67	
Furniture and fixtures. ....	7,430.72	
Instruments. ....	452.96	
Horses, wagons and sundry equipment. ....	1,019.02	
Materials. ....	44,186.72	82,284.24
Accounts receivable. ....	\$247,187.37	
Cash in bank—Current account. ....	136,504.09	
For payment of outstanding interest coupons. ....	50,920.00	
Sinking fund on deposit with Trustees. ....	567.87	435,179.33
J. J. Albright and Niagara Lockport Co.—Claims against. ....		445,113.20
Insurance and taxes prepaid. ....		18,160.48

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\$30,840,896.12

## THE ONTARIO TRANSMISSION COMPANY, LIMITED

October 31, 1923

## LIABILITIES

## Capital Stock:

Ontario Power Company of Niagara Falls, 100,000 shares of par value of \$100 each.....	\$10,000,000.00	
Ontario Transmission Company, Limited, 10,000 shares of par value of \$100 each.....	1,000,000.00	
		\$11,000,000.00

## Bonds and Debentures:

Ontario Power Company of Niagara Falls, First mortgage 5% gold bonds, due 1st February, 1943—issued and outstanding.....	\$8,980,000.00	
(Pledged to the Bank of Montreal to secure advances to the Hydro-Electric Power Commission of Ontario, \$1,400,000.)		
Ontario Transmission Company, Limited, First mortgage 5% gold bonds due 1st May, 1945.....	1,568,000.00	
Interest coupons due and not yet presented for payment...	11,720.00	
Interest accrued to October 31, 1922.....	151,450.00	
		10,711,170.00

## Hydro-Electric Power Commission of Ontario:

Re construction of third pipe line.....	\$3,516,524.29	
Re 6% 1941 bonds issued by the Commission for the purpose of retiring the 1921 issue of the Power Company.....	\$3,200,000.00	
Accrued interest thereon.....	67,856.16	
		3,267,856.16

Accrued interest on \$8,000,000 bonds issued by the Com- mission to cover the purchase price of the capital stock of the Power Company.....	80,000.00	
Current account.....	71,595.42	

Accounts payable and accrued charges.....	6,935,975.87	
Reserve for contingencies.....	385,765.17	
Reserve for renewal of plant, equipment and transmission lines.....	199,924.84	
Surplus.....	1,509,517.21	
	98,543.03	

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\$30,840,896.12



## THE ONTARIO POWER COMPANY OF NIAGARA FALLS AND

## Combined Revenue and Expenditure Account

## EXPENDITURE

Power purchased.....	\$346,960.09	
Water power rentals.....	111,615.68	
Taxes.....	93,079.84	
Maintenance costs.....	126,128.44	
Operating expenses.....	182,244.47	
Insurance premiums.....	8,798.87	
Administration and legal expenses.....	61,839.66	
Depreciation on furniture, instruments, construction plant and tools.....	10,998.98	
		\$941,666.03
Provision for renewal of plant and equipment.....		116,540.34
Bond Interest:		
On issues of the companies.....	\$531,816.94	
Exchange thereon.....	11,213.44	
On 6% 1941 issue of the Commission.....	192,000.00	
		735,030.38
Proportion of Discount on Bonds:		
On issues of the companies.....	\$38,420.04	
On 6% 1941 issue of the Commission.....	7,824.00	
		46,244.04
Proportion of American exchange on remittance to retire 1921 bonds.....	17,907.84	
Interest on cash advances re third pipe line.....	196,705.97	
Other interest.....	38,769.18	
		1,034,657.41
		\$2,092,863.78
Operating surplus carried to appropriation account.....		631,746.13
		<u>\$2,724,609.91</u>

## THE ONTARIO POWER COMPANY OF NIAGARA FALLS AND

## Appropriation

Provision for Sinking Funds:		
On 5% first mortgage bonds of the Power Company.....	\$95,466.00	
On 5% first mortgage bonds of the Transmission Company, Limited.....	16,789.50	
		112,255.50
On 8,000,000 bonds issued by the Commission to cover the purchase price of the capital stock of the Power Company.....	\$100,000.00	
On 6% 1941 bonds to the amount of 3,200,000 issued by the Commission for the purpose of retiring the 1921 bonds of the Power Company.....	32,000.00	
On cash advances re construction of third pipe line.....	63,264.36	
		195,264.36
Provision for interest on \$8,000,000 bond issue of the Commission	\$320,000.00	
American exchange thereon.....	7,056.54	
		327,056.54
		\$634,576.40
Surplus carried forward to Balance Sheet.....		98,543.03
		<u>\$733,119.43</u>

## THE ONTARIO TRANSMISSION COMPANY, LIMITED

for Year Ending October 31, 1923

## REVENUE

## Power Sales:

To Sundry customers.....	\$1,635,632.13
To Hydro-Electric Power Commission of Ontario for the purpose of—	
(a) The Niagara system.....	1,042,259.24
(b) The Thorold system.....	25,755.85

	<u>\$2,703,647.22</u>
Miscellaneous revenue.....	20,962.69

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\$2,724,609.91

## THE ONTARIO TRANSMISSION COMPANY, LIMITED

## Account

Surplus from October 31, 1922.....	\$88,200.62
Operating surplus for year brought down.....	631,746.13
Profit on bonds redeemed in the year:	
First mortgage bonds of the Power Company.....	\$1,830.27
First mortgage bonds of the Transmission Company.....	1,000.00
	<u>2,830.27</u>
Former provision to cover accrued portion of Sinking fund not now required....	10,342.41

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\$733,119.43

**THE TORONTO POWER COMPANY,  
ELECTRICAL DEVELOPMENT COMPANY OF ONTARIO, LIMITED,**

**Balance Sheet,**

**ASSETS**

Plant and Equipment:		
Hydraulic and generating plant and equipment.....	\$7,833,791.25	
Transformer stations, transmission lines (including right-of-way) and electrical equipment.....	8,828,623.97	
Properties at Scott Street (including Steam generating plant).....	1,825,434.51	
Furniture and fixtures, automobiles, tools and instruments..	20,693.71	
	<hr/>	\$18,508,543.44
Water rights and privileges, franchises, contracts and goodwill.....		4,945,637.62
Material and supplies on hand.....		117,402.16
Accounts receivable—less provision for doubtful debts.....		513,907.52
Cash:		
In bank.....	\$192,061.83	
Sinking fund on deposit with Trustees, for Bond holders....	803.12	
Other funds on deposit with Trustees, for Bond holders....	91,026.39	
On deposit to pay interest coupons overdue, but not presented.....	6,897.50	
	<hr/>	290,788.84
Claim against the Dominion Government in respect of Income Taxes paid for the thirteen months ending December 31, 1921—which should be recoverable..		72,334.46
Expenses incidental to purchase by the Commission, of the capital stock of the Power Companies under purchase agreement, dated August 15, 1922—less portion written off.....		155,431.80
Prepaid taxes and insurance.....		17,628.39

\$24,621,674.23

NOTE: With the purchase by the Commission of the whole of the Capital Stock of the Toronto Power Company, Limited, for \$413,200 (or \$2,586,800.00 below par) the price actually paid by the Commission for Water Rights, Privileges, Franchises, Contracts and Goodwill, is, accordingly, reduced from \$4,945,637.62 shown above to \$2,358,837.62.



## LIMITED, AND ITS SUBSIDIARIES

## AND TORONTO AND NIAGARA POWER COMPANY

October 31, 1923

## LIABILITIES

## Capital Stock:

Capital stock of the Toronto Power Company issued and outstanding.....	\$3,000,000.00	
Capital stock of the Electrical Development Company of Ontario, Limited—		
Common shares issued.....	\$3,006,100.00	
Less: held by the Toronto Power Co....	3,005,500.00	
		\$600.00
Preference shares issued.....	\$2,993,900.00	
Less: held by the Toronto Power Co....	2,993,350.00	
		550.00
Outstanding in hands of public.....		1,150.00
Capital stock of the Toronto & Niagara Power Company...	\$874,100.00	
Less: held by the Electrical Development Company of Ontario, Limited.....	874,100.00	

## Debenture Stock and Bonds:

Guaranteed 4½% debenture stock of the Toronto Power Company, Limited, due May 1, 1941, guaranteed by The Hydro-Electric Power Commission of Ontario, and by the Province of Ontario.....	\$11,822,632.30	
Five per cent. mortgage bonds of the Toronto Power Company, Limited, due July 1, 1924, secured by the preference stock of the Electrical Development Company of Ontario, Limited, and guaranteed by the Toronto Railway, Company.....	4,103,200.00	
First mortgage 5% gold bonds of the Electrical Development Company of Ontario, Limited, due March 1, 1933..	\$9,079,500.00	
Less: held by the Toronto Power Co.....	5,014,000.00	
		4,065,500.00
First mortgage 5% gold bonds of the Toronto and Niagara Power Co. due March 1, 1933.....	\$1,500,000.00	
Less: held by the Electrical Development Co. of Ontario, Limited.....	1,500,000.00	
Interest accrued to October 31, 1923.....	102,265.82	
Interest coupons due but not presented.....	6,897.50	
		20,100,495.62
Hydro-Electric Power Commission of Ontario Current accounts.....		355,497.83
Accrued charges.....		12,694.92
Reserve for renewal of plant and equipment.....		567,401.47
Reserve for contingencies.....		447,323.92
Surplus.....		137,110.47
		<u>\$24,621,674.23</u>

## THE TORONTO POWER

## Revenue and Expenditure Account for

EXPENDITURE		
Maintenance and Costs:		
Generating plant.....	\$78,024.84	
Transmission system and steam plant.....	47,084.13	
		\$125,108.97
Operating Expenses:		
Generating plant.....	\$100,507.85	
Transmission system and steam plant.....	174,503.90	
		\$275,011.75
Water Power Rentals.....	79,787.77	
Taxes.....	89,261.97	
Insurance.....	11,233.97	
Administrative Expenses.....	43,784.20	
Proportion of expenses incidental to purchase by the Commission of the Capital		
Stock of the Power Companies.....	25,059.81	
Provision for renewal of plant and equipment.....	188,924.13	
Interest:		
On 4½% guaranteed debenture stock of the Toronto Power		
Company.....	\$544,644.57	
On 5% guaranteed bonds of the Toronto Power Company..	204,974.18	
On 5% first mortgage bonds of the Electrical Development		
Company of Ontario.....	204,491.78	
		954,110.53
Operating surplus carried to Appropriation Account.....		222,317.17
		<u>\$2,014,600.27</u>

## THE TORONTO POWER

## Appropriation

Provision for interest on \$413,200 paid by the Commission for the capital stock of the Toronto Power Company, Limited (part of bond issue \$619,000).....		\$24,792.00
Provision for Sinking Funds:		
On 4½% guaranteed debenture stock of the Toronto Power		
Company.....	\$142,368.63	
On 5% guaranteed bonds of the Toronto Power Company..	43,083.60	
On 5% First Mortgage Bonds of Electrical Development		
Company of Ontario, Limited.....	45,517.50	
On 6% \$413,200 paid by the Commission for the capital		
stock of the Toronto Power Company, Limited (part		
of bond issue of \$619,000).....	4,338.60	
		235,308.33
Surplus carried forward.....		137,110.47
		<u>\$397,210.80</u>

## HYDRO-ELECTRIC POWER

## Account with the Provincial Treasurer

OCTOBER 31, 1923:		
Cheques to cover interest for year ending October 31, 1923.....		\$6,790,756.51
NOVEMBER 1, 1922, TO OCTOBER 31, 1923:		
Provincial expenditures.....		100,323.44
Balance carried down.....		127,443,784.02

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\$134,334,863.97

## COMPANY, LIMITED

## Twelve Months Ending October 31, 1923

## REVENUE

Power Sales:		
To Hydro-Electric Power Commission.....	\$803,376.26	
To Sundry Customers.....	1,077,354.65	
		\$1,880,730.91
Miscellaneous and Interest Revenue.....		133,869.36

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\$2,014,600.27

## COMPANY, LIMITED

## Account

Surplus from 1922 brought forward.....		\$116,737.09
Operating surplus brought down.....		222,317.17
Profit on redemption of debenture stock and bonds:		
On guaranteed debenture stock of the Toronto Power Com-		
pany, Limited.....	\$26,339.26	
On 5% first mortgage bonds of Electrical Development		
Company of Ontario, Limited.....	1,026.77	
		27,366.03
Exchange profits on remittances to London, England.....	\$39,862.06	
Less: Exchange expense on remittances to New York.....	9,071.55	
		30,790.51
		\$397,210.80

## COMMISSION OF ONTARIO

## for the Year Ending October 31, 1923

## OCTOBER 31, 1923:

## Sundry cash advances:

General account.....	\$48,266,190.33	
Chippawa Development account.....	65,822,145.52	
Central Ontario System account.....	12,711,858.78	
Provincial expense account.....	176,291.25	
		\$126,976,485.88
Interest on balances to October 31, 1923.....		6,997,462.34
Deferred interest in respect to Nipigon system to October 31, 1922.....		360,915.75
		\$134,334,863.97

## NOVEMBER 1, 1923:

Balance.....		\$127,443,784.02
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## SECTION X

### MUNICIPAL ACCOUNTS

The Municipal Accounts section of this report presents the results of the operation of the various Hydro systems from a municipal standpoint collectively and individually. Statements prepared from figures extracted from the books of all Hydro municipalities are submitted herein to show how each has operated during the past year; also the financial status at the present time; as well as much useful statistical information, all so arranged as to permit of comparisons being made between various systems and between different municipalities in each system.

The books of account in all municipalities which have contracted with the Hydro-Electric Power Commission of Ontario for a supply of power are kept in accordance with the provisions set forth in the publication "Uniform Accounting for Municipal Electric Utilities," issued by the Commission. The Commission, by a system of periodical inspections and reports, keeps in close touch with the operating conditions of each local system.

During the year 1923, the Uniform Accounting system was installed in the following municipalities as each became ready for the service: Agincourt, Belle River, Merlin, Paisley, Point Edward, Stouffville, Sutton, Warkworth and Whitby.

Periodical inspections were made of the books of all Hydro municipalities, and local officials have been assisted in the improvement of their office routine with a view to standardizing, as far as possible, the methods employed. In the majority of the smaller municipalities, much of the bookkeeping is performed by representatives of the Municipal Audit department, in order to insure the employment of proper classifications of revenue and expenditures, to save time in preparation of reports, to insure compliance with all the requirements of the Standard Accounting system, and to make certain that the accounts represent as truly as possible the actual operating results for the year.

The first financial statement in this preface presents consolidated operating reports for each year since Hydro was inaugurated and combines the results of all the systems. Study of this report will show that the revenue has been increasing to a most satisfactory degree. The annual surpluses, after providing all possible cost of operation, including an adequate depreciation charge, have increased until, in 1923, the combined annual surpluses amounted to \$1,093,753.36, an increase of over 35% over the best previous year, 1920.

The second statement presents consolidated balance-sheets for each year since 1912, and also shows clearly the march of progress. It is worth noting that the total plant value has increased from \$10,081,469.16 in 1913 to \$48,428,562.56 in 1923, and the total assets from \$11,907,826.86 to \$62,892,544.90. The liabilities have not increased in the same proportion as the assets, rising from \$10,468,351.79 to \$38,963,826.11. The reason for this is that much of the cost of the increasing plant value has been financed out of Surplus and Reserve accounts without increasing the liabilities of the various systems. By this procedure the funds of the systems are used to best advantage. Examination of the results will also show that there is a steady decline in the percentage of net debt to total assets; being from 88.0 per cent in 1913 to 64.9 per cent in

1923. The equity in the Hydro-Electric Power Commission System automatically acquired through the inclusion of sinking fund as part of the cost of power is not taken into account in arriving at these percentages.

**Combined Balance Sheets:** Following "Statement A" are presented balance-sheets combining the financial results of the two distinct divisions into which, so far as finances are concerned, the whole Hydro-Electric undertakings of the municipalities is divided. This matter is referred to at greater length on page 208 in the Introduction to Section IX, and information respecting the several columns of figures is given in a statement immediately preceding these balance-sheets.

The seven statements, "A" following the two consolidated reports, and "B" to "G" following the combined balance-sheets, show the results of operations and the financial status of each municipal system, and also give information respecting revenue, number of consumers and consumption; cost of power to municipalities; power and lighting rates charged to consumers, etc. Some of the figures are comparative for all the years of operation. In the statements "A," "B," and "C," the figures are arranged in groups under each system and alphabetically for the municipalities in each system; in the statements "D" to "G" all "Hydro" municipalities are arranged alphabetically.

"**Statement A**" shows balance-sheets for each municipality with the plant value sub-divided into the general natural sub-divisions specified in the standard accounting system, and there are also shown the other items which make up the total assets. It is to be noted that among the assets there are items entitled "Equity to Hydro System." These items represent the amount of accumulated Sinking Fund paid by the various municipalities through the medium of "Power Cost" toward the ultimate retirement of the Hydro-Electric Power Commission's construction debt. The total accumulation to the end of 1923 is shown on the Consolidated Balance-sheet to be \$2,929,603.94.

In each case the balance-sheet is complete and final, including either in "Accounts receivable" or "Accounts payable" the adjustments with this Commission of the differences between the estimated and the actual costs of power.

The actual liabilities of each local system are set out under their general sub-divisions,—debenture balance, accounts payable, bank overdraft, and other liabilities, this last account including local debentures issued by municipalities to finance ornamental street light systems as local improvements.

The reserves for depreciation, and the acquired equity in the Hydro-Electric Power Commission system, are also listed separately and totalled; and under the heading "Surplus" is included not only the free operating profit but the accumulation of sinking fund applicable to debenture debt and also the amount of debentures already retired out of revenue which properly belong under this heading.

The Depreciation Reserve now amounts to 22.1 per cent of the total depreciable plant, while the Depreciation Reserve and Surplus combined have already reached the sum of \$20,999,114.85, approximating 43.4 per cent of the total plant cost.

"**Statement B**" is a consolidated condensed operating report, showing the essential figures of each municipal system's operation in such a manner as to facilitate a ready comparison of the various results. The population served by each system, as well as the number of customers and the load taken in December, 1923, are also shown in order to give an idea of the relative sizes of the respective utilities.



Of the 224 municipalities included in this report, a total of 19 failed to meet their actual cost of operation without regard to depreciation. A total of 21, including the above, failed to provide full theoretical depreciation in addition to all operating and maintenance expenses, but their relative unimportance is clearly disclosed by an examination of the reports. These 21 municipalities indicate a total theoretical loss of \$84,400.49, while the remaining 203 municipalities piled up a surplus of \$1,178,153.85, thus leaving a net surplus for all Hydro municipalities of \$1,093,753.36 during the year.

**"Statement C"** shows detailed operating reports for each utility. The cost of power includes the adjustment made by this Commission and hence covers the actual cost and not the cost at the interim billed rates.

**"Statement D,"** in many respects, is the most interesting report in the series. It gives more information respecting the actual results of operation from the viewpoint of the consumer than is obtainable from the published reports of any other system of electric utilities regardless of where operated or whether publicly or privately owned.

This "Statement D" shows the revenue, kilowatt-hour consumption, number of consumers, average monthly consumption, average monthly bill and the net average cost per kilowatt-hour both for domestic and for commercial service in each municipality since "Hydro" was first installed. For comparative purposes the rates in effect prior to the installation of "Hydro" are also indicated. The average flat-rate cost of horsepower as billed to power customers since 1917 is also shown.

In many municipalities the average monthly bill has increased during the past two years. This is due to the steady increase in the use of better lighting, and the general installation of ranges, heaters and miscellaneous appliances. It is estimated that over 35,000 electric ranges are now in use and the number is increasing rapidly. In practically all municipalities the cost per kilowatt-hour has been steadily declining, due to the constantly increasing use of electric appliances, the adoption of a uniform follow-up rate of 2 cents per kilowatt-hour for domestic and farm service throughout the province, and the consequently large number of kilowatt-hours consumed at the lower rate.

**"Statement E"** shows the installation of street lights in each municipality together with the rates set by this Commission, the revenue for 1923 and the cost per capita in each municipality.

**"Statement F"** and **"Statement G"** present the local rates in use by each utility and also those charged by the Commission on the interim power bills.

#### MUNICIPALITIES OUT OF DEBT

The automatic reduction in the debenture debt, due to the annual principal or sinking fund payments being provided for out of revenue, and the remarkable accumulation of assets reflect the satisfactory financial condition of the Hydro utilities generally. The tabular statement on the opposite page shows in condensed form the relation of assets to liabilities in 54 municipalities. In the first 30 municipalities the quick assets such as cash, bonds, accounts receivable and inventories exceed in value the total liabilities, including the debenture balance, and they may fairly be considered as being out of debt. In the remaining 24 municipalities the excess of liabilities over the quick assets is relatively so small that a number of them will be transferred to the "out-of-debt" list when the books are closed at the end of 1924.



Municipality	Total assets	Total liabilities	Total quick assets	Net balance liabilities over quick assets	Excess of quick assets over all liabilities
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Ailsa Craig.....	17,497.67	3,644.98	3,647.42	.....	2.44
Baden.....	21,511.16	4,584.97	6,437.62	.....	1,852.65
Barrie.....	228,131.81	30,211.59	72,787.07	.....	42,575.48
Beachville.....	29,903.50	4,181.00	9,949.85	.....	5,768.85
Bothwell.....	20,755.03	5,431.04	9,257.07	.....	3,826.03
Coldwater.....	20,358.70	6,155.70	6,960.90	.....	805.20
Collingwood.....	182,415.46	22,874.65	50,799.39	.....	27,924.74
Creemore.....	22,430.71	4,508.58	9,089.66	.....	4,581.08
Dundalk.....	15,696.42	3,727.66	3,816.22	.....	88.56
Elmvale.....	21,871.67	5,503.16	7,337.94	.....	1,834.78
Georgetown.....	78,814.01	16,665.53	19,210.14	.....	2,544.61
Lucan.....	29,205.97	8,700.56	9,859.42	.....	1,158.86
Mitchell.....	69,649.75	5,622.20	5,952.37	.....	330.17
Mt. Brydges.....	10,550.34	3,564.10	3,652.01	.....	87.91
New Toronto.....	119,011.38	9,548.27	13,912.70	.....	4,364.43
Norwich.....	46,779.49	10,608.60	13,679.25	.....	3,070.65
Otterville.....	11,886.07	3,289.24	4,165.08	.....	875.84
Palmerston.....	52,171.30	12,071.54	16,331.07	.....	4,259.53
Pictou.....	87,161.21	3,074.30	36,800.32	.....	33,726.02
Prescott.....	89,362.96	16,225.66	21,604.66	.....	5,379.00
Ridgetown.....	60,033.73	14,127.35	22,770.36	.....	8,643.01
Rockwood.....	11,816.19	25.90	704.02	.....	678.12
St. George.....	16,398.69	5,081.44	8,056.25	.....	2,974.81
Tavistock.....	30,462.48	7,871.14	10,732.20	.....	2,861.06
Thamesford.....	15,759.16	3,937.17	4,296.58	.....	359.41
Waterdown.....	26,986.04	4,501.02	6,793.76	.....	2,292.74
Waterford.....	27,124.82	73.92	5,491.31	.....	5,417.39
West Lorne.....	25,365.17	8,618.46	10,405.15	.....	1,786.69
Winchester.....	28,588.14	9,877.55	12,098.97	.....	2,221.42
Zurich.....	13,927.40	5,131.30	6,200.38	.....	1,069.08
Acton.....	44,965.08	6,390.74	5,711.57	679.17	.....
Ayr.....	22,788.02	6,732.62	4,556.17	2,176.45	.....
Beaverton.....	33,306.57	12,706.85	8,930.69	3,776.16	.....
Caledonia.....	16,708.32	3,655.99	2,087.33	1,568.66	.....
Chesterville.....	21,643.34	5,992.82	4,473.32	1,519.50	.....
Dorchester.....	13,512.79	3,784.32	3,185.43	598.89	.....
Dutton.....	20,213.82	7,428.75	5,468.58	1,960.17	.....
Granton.....	9,025.79	3,714.83	2,964.15	750.68	.....
Hagersville.....	35,605.99	6,197.15	6,167.37	29.78	.....
Highgate.....	11,657.78	4,387.25	3,218.24	1,169.01	.....
Merriton.....	35,561.37	4,177.72	3,227.63	950.09	.....
Rodney.....	19,523.60	7,857.47	6,352.10	1,505.37	.....
St. Jacobs.....	12,314.65	5,814.59	3,333.32	2,481.27	.....
Seaforth.....	83,364.88	25,003.00	20,940.57	4,062.43	.....
Stayner.....	30,761.72	9,634.67	7,872.71	1,761.96	.....
Thamesville.....	26,448.41	8,774.34	8,335.16	439.18	.....
Thorold.....	75,607.54	6,753.13	6,505.16	247.97	.....
Tilbury.....	33,998.39	12,443.37	7,920.82	4,522.55	.....
Tillsonburg.....	107,262.23	27,569.37	25,097.15	2,472.22	.....
Victoria Harbour.....	14,229.12	4,687.79	4,631.73	56.06	.....
Watford.....	24,249.42	7,211.91	4,629.91	2,582.00	.....
Waubashene.....	8,402.53	2,784.95	2,671.72	113.23	.....
Williamsburg.....	4,445.71	1,832.86	1,490.22	342.64	.....
Woodbridge.....	26,497.78	8,359.13	7,936.80	422.33	.....

A study of these various reports will clearly show that Hydro business in general and that of Hydro municipalities in particular are in a most satisfactory financial condition. There is no criticism of the working out of the economic policies of the Hydro-Electric Power Commission of Ontario which cannot intelligently and satisfactorily be met with direct appeal to the official figures in the balance sheets and operating reports herein presented.

## CONSOLIDATED

YEAR.....	1912	1913	1914
Number of municipalities included.....	28	45	69
<b>EARNINGS</b>	<b>\$ c.</b>	<b>\$ c.</b>	<b>\$ c.</b>
Domestic light.....		572,154.38	789,130.81
Commercial light.....		525,438.16	673,803.92
Commercial power.....		905,378.17	1,214,829.31
Municipal power.....			
Street light.....		560,925.56	698,409.71
Rural.....			
Miscellaneous.....		53,543.24	57,482.41
Total earnings.....	1,617,674.00	2,617,439.51	3,433,656.16
<b>EXPENSES</b>			
Power purchased.....		789,632.87	1,045,752.65
Substation operation.....		78,394.81	97,658.90
Substation maintenance.....		18,698.46	31,790.99
Distribution system operation and maintenance.....		104,114.51	130,998.65
Line transformer maintenance.....		8,547.61	11,764.32
Meter maintenance.....		5,222.19	9,536.07
Consumers' premises expenses.....		53,108.38	65,192.23
Street light operation and maintenance.....		84,903.76	113,047.80
Promotion of business.....		72,303.51	86,683.02
Billing and collecting.....		77,351.76	103,560.71
General office, salaries and expenses.....		154,932.69	230,899.75
Undistributed expense.....		65,423.64	89,350.91
Interest.....		528,549.21	662,092.34
Sinking fund and principal payments on debentures.....		*	*
Total expenses.....	1,377,168.00	2,041,183.40	2,678,328.34
Surplus.....	240,506.00	576,256.11	755,327.82
Depreciation charge.....	124,992.47	262,675.24	357,883.31
Surplus less depreciation.....	115,513.53	313,580.87	397,444.51

\*Debenture payments included in "Interest."

## OPERATING REPORT

1915	1916	1917	1918	1919	1920
99	128	143	166	181	186
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
944,271.08	1,172,878.96	1,417,460.31	1,632,272.12	1,991,632.31	2,546,345.30
720,209.26	812,130.78	899,023.72	968,399.42	1,175,143.56	1,512,854.63
1,501,797.78	1,921,152.31	2,665,280.65	3,417,248.37	3,443,107.13	3,752,188.22
835,970.87	930,057.48	967,495.10	902,875.55	988,900.95	532,279.09
68,046.29	147,381.50	120,805.39	161,243.70	228,270.65	1,005,535.11
4,070,295.28	4,983,601.03	6,070,065.17	7,082,039.16	7,827,054.60	168,919.95
					189,778.63
					9,707,900.93
1,485,614.72	1,959,446.83	2,563,880.17	2,807,769.33	3,284,490.68	4,216,667.87
107,607.31	153,761.08	203,091.20	238,257.34	217,638.89	285,407.35
25,935.56	46,131.53	42,129.04	60,805.92	81,853.63	102,050.81
154,409.71	154,247.17	169,326.24	223,347.81	286,310.76	344,551.57
11,508.92	14,528.17	25,328.95	30,488.83	42,509.12	46,323.09
12,899.14	24,218.48	44,461.55	63,155.56	78,726.64	123,701.18
47,494.26	52,602.01	61,765.14	65,149.59	84,301.24	116,283.52
136,983.38	145,471.50	157,857.73	196,157.18	215,963.86	236,930.79
74,402.55	79,324.85	73,516.37	64,962.78	77,789.22	78,294.85
131,541.27	154,508.58	188,083.84	208,660.76	236,504.75	295,942.88
236,777.86	306,709.35	349,932.05	421,680.15	452,131.22	559,695.29
129,209.15	97,333.97	102,938.80	117,474.07	190,690.09	256,400.33
817,978.89	951,781.99	1,085,180.80	1,238,425.53	1,285,571.51	1,431,807.16
*	*	*	*	*	*
3,371,414.00	4,140,065.51	5,077,491.08	5,736,334.85	6,531,481.61	8,094,056.69
698,881.28	843,535.52	992,574.09	1,345,704.31	1,295,572.99	1,613,844.24
414,506.99	486,141.80	607,296.29	718,162.30	814,219.37	902,028.75
284,374.29	357,393.72	385,367.80	627,542.01	481,353.62	711,815.49



### CONSOLIDATED OPERATING REPORT—Continued

YEAR.....	1921	1922	1923
Number of municipalities included.....	205	214	224
<b>EARNINGS</b>	<b>\$ c.</b>	<b>\$ c.</b>	<b>\$ c.</b>
Domestic light.....	3,149,080.03	3,786,608.23	5,166,452.24
Commercial light.....	1,851,501.76	2,158,306.34	3,260,772.50
Commercial power.....	3,895,437.46	4,383,912.97	5,927,666.37
Municipal power.....	654,531.01	973,263.38	1,161,598.60
Street light.....	1,060,357.77	1,160,446.81	1,269,604.48
Rural.....	145,566.57	105,877.09	116,639.06
Miscellaneous.....	225,467.70	187,689.39	316,311.21
Total earnings.....	10,981,942.30	12,756,104.21	17,219,044.46
<b>EXPENSES</b>			
Power purchased.....	4,876,650.31	6,636,853.37	8,699,026.67
Substation operation.....	314,838.35	315,443.70	474,442.13
Substation maintenance.....	104,798.01	100,763.67	133,815.53
Distribution system operation and maintenance...	487,918.33	519,252.16	636,477.41
Line transformer maintenance.....	65,088.46	52,932.26	75,920.10
Meter maintenance.....	116,722.97	107,806.88	139,104.81
Consumers' premises expenses.....	134,854.92	143,388.88	218,682.02
Street light operation and maintenance.....	297,481.52	297,363.86	299,579.08
Promotion of business.....	101,804.46	129,932.63	184,371.00
Billing and collecting.....	321,685.71	338,153.50	444,306.92
General office, salaries and expenses.....	656,268.11	605,852.50	937,463.47
Undistributed expense.....	308,874.42	385,895.03	359,206.91
Interest.....	998,611.47	1,074,657.44	1,615,205.16
Sinking fund and principal payments on debentures.	532,183.96	635,469.90	990,907.14
Total expenses.....	9,317,781.00	11,343,765.78	15,208,508.35
Surplus.....	1,664,161.30	1,412,338.43	2,010,536.11
Depreciation charge.....	1,044,434.85	715,814.24	916,782.75
Surplus less depreciation.....	619,726.45	696,524.19	1,093,753.36

\*Debenture payments included in "Interest."

## CONSOLIDATED BALANCE SHEET

YEAR.....	1913	1914	1915
Number of municipalities included.....	45	69	99
<b>ASSETS</b>	<b>\$ c.</b>	<b>\$ c.</b>	<b>\$ c.</b>
Lands and buildings.....	626,707.34	791,732.20	873,838.18
Substation equipment.....	1,090,875.69	1,476,087.84	1,582,062.56
Distribution system—overhead.....	2,690,834.74	3,422,763.93	4,234,626.05
Distribution system—underground.....	644,514.24	807,153.53	928,420.77
Line transformers.....	615,546.20	787,613.52	981,754.70
Meters.....	840,606.64	1,172,475.11	1,418,165.08
Street lighting equipment—regular.....	900,614.80	1,071,255.37	1,309,628.49
Street lighting equipment—ornamental.....	62,765.34	270,386.55	197,644.82
Miscellaneous construction expenses.....	866,551.89	2,062,035.90	1,701,182.66
Steam or hydraulic plant.....	1,401,175.28	420,108.33	461,651.60
Old plant.....	341,277.00	619,513.12	1,184,372.86
Total plant.....	10,081,469.16	12,901,125.40	14,873,347.77
Bank and cash balance.....	450,887.97	422,350.12	284,653.96
Securities and investments.....			
Accounts receivable.....	344,487.95	561,873.08	602,920.69
Inventories.....	540,274.58	615,226.76	726,556.76
Sinking fund on local debentures.....	431,747.27	625,217.03	868,983.78
Equity in Hydro system.....			
Other assets.....	58,959.93	123,410.97	326,801.11
Total assets.....	11,907,826.86	15,249,203.36	17,683,264.07
<b>LIABILITIES</b>			
Debenture balance.....	8,711,308.37	10,678,078.36	11,831,811.03
Accounts payable.....	1,553,711.45	1,682,150.29	2,040,038.01
Bank overdraft.....	160,919.16	228,622.50	292,106.44
Other liabilities.....	42,412.81	113,838.66	37,388.31
Total liabilities.....	10,468,351.79	12,702,689.81	14,201,343.79
<b>RESERVES</b>			
For depreciation.....	478,145.88	850,618.07	1,337,739.73
For equity in H.E.P.C. system.....			
Total reserves.....	478,145.88	850,618.07	1,337,739.73
<b>SURPLUS</b>			
Debentures paid.....	202,751.26	320,129.10	394,466.22
Local sinking fund.....	431,747.27	625,217.03	868,983.78
Additional operating surplus.....	326,830.66	750,549.35	880,730.55
Total surplus.....	961,329.19	1,695,895.48	2,144,180.55
Total liabilities, reserves and surplus.....	11,907,826.86	15,249,203.36	17,683,264.07
Percentage of net debt to total assets.....	88	83.3	80.3

## CONSOLIDATED

YEAR.....	1916	1917	1918
Number of municipalities included.....	128	143	166
<b>ASSETS</b>	<b>\$ c.</b>	<b>\$ c.</b>	<b>\$ c.</b>
Lands and buildings.....	1,335,936.33	1,546,241.41	1,859,888.69
Substation equipment.....	1,934,626.12	2,471,293.82	2,820,448.70
Distribution system—overhead.....	4,832,353.27	6,080,073.42	6,627,237.39
Distribution system—underground.....	1,095,709.62	1,157,059.90	1,216,288.59
Line transformers.....	1,179,132.07	1,483,839.44	1,772,691.35
Meters.....	1,711,299.49	1,999,095.48	2,238,143.70
Street lighting equipment—regular.....	1,251,057.13	1,237,734.69	1,200,625.65
Street lighting equipment—ornamental.....	306,388.95	361,975.74	531,502.61
Miscellaneous construction expenses.....	2,059,263.42	2,184,015.84	2,395,096.50
Steam or hydraulic plant.....	864,500.01	896,753.20	214,575.75
Old plant.....	759,748.66	649,852.51	1,476,413.00
Total plant.....	17,330,015.07	20,077,935.45	22,352,951.93
Bank and cash balance.....	1,061,029.90	340,026.50	391,194.91
Securities and investments.....			
Accounts receivable.....	695,152.23	1,285,097.33	1,124,018.44
Inventories.....	764,504.59	1,261,398.36	972,996.96
Sinking fund on local debentures.....	1,166,017.73	1,337,578.96	1,663,298.05
Equity in Hydro system.....			
Other assets.....	342,215.87	125,240.05	444,787.63
Total assets.....	21,358,935.39	24,427,276.65	26,949,247.92
<b>LIABILITIES</b>			
Debenture balance.....	15,058,641.57	15,593,773.61	17,209,217.70
Accounts payable.....	969,187.75	1,537,669.11	1,007,727.79
Bank overdraft.....	178,413.26	886,177.94	576,816.49
Other liabilities.....	491,874.90	429,104.20	350,013.21
Total liabilities.....	16,698,117.48	18,446,724.86	19,143,775.19
<b>RESERVES</b>			
For depreciation.....	1,843,804.68	2,463,723.83	3,133,550.17
For equity in H.E.P.C. system.....			
Total reserves.....	1,843,804.68	2,463,723.83	3,133,550.17
<b>SURPLUS</b>			
Debentures paid.....	549,778.59	694,797.90	920,076.56
Local sinking fund.....	1,165,785.94	1,340,615.38	1,662,602.69
Additional operating surplus.....	1,101,448.70	1,481,414.68	2,089,243.31
Total surplus.....	2,817,013.23	3,516,827.96	4,671,922.56
Total liabilities, reserves and surplus.....	21,358,935.39	24,427,276.65	26,949,247.92
Percentage of net debt to total assets.....	78.4	75.5	71.0



## BALANCE SHEET—Continued

1919	1920	1921	1922	1923
191	195	215	226	235
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
1,995,545.83	2,175,568.24	3,230,985.63	3,334,522.68	4,488,054.93
2,915,125.56	3,231,050.80	5,403,689.90	5,046,857.98	6,015,919.75
7,445,820.31	8,579,881.49	8,397,361.48	11,165,330.24	13,135,581.76
1,206,296.88	1,313,369.29	1,401,135.97	1,598,053.02	1,959,120.41
2,073,113.45	2,560,581.59	3,077,649.83	3,618,684.73	4,211,655.89
2,587,566.32	3,053,135.20	3,552,076.79	4,033,689.52	4,548,933.73
1,206,638.71	1,269,006.98	1,335,997.13	1,419,016.05	1,061,473.85
546,497.68	557,678.13	610,586.70	666,084.50	708,431.22
2,430,101.08	2,697,636.12	3,030,134.16	3,261,495.74	3,681,274.88
986,200.57	757,194.47	704,848.46	565,158.54	566,619.86
805,959.89	864,298.39	912,388.55	7,997,947.87	8,051,496.28
24,298,866.28	27,059,400.70	31,656,854.60	42,706,840.87	48,428,562.56
462,437.23	943,858.12	900,842.34	1,164,336.24	1,276,140.06
627,076.53	341,855.88	556,608.53	443,938.18	1,153,424.47
1,921,166.69	2,022,538.88	2,148,287.05	3,874,317.14	3,198,769.34
1,032,569.75	1,400,671.89	1,504,596.28	1,738,795.96	1,819,711.62
1,925,455.77	2,244,004.34	2,541,718.35	3,416,231.45	3,896,261.28
369,071.89	577,584.06	795,570.51	1,543,434.12	2,929,603.94
86,216.05	25,447.07	78,929.84	238,940.13	190,071.63
30,722,860.19	34,615,360.94	40,111,979.23	55,126,834.09	62,892,544.90
18,133,462.44	19,268,072.04	21,619,220.99	30,454,186.12	33,056,501.29
1,420,926.66	1,840,137.54	1,887,567.93	3,699,292.52	3,708,781.76
403,235.57	514,671.99	989,099.98	456,706.69	680,714.59
670,271.90	642,293.65	938,368.84	586,203.02	1,517,828.47
20,627,896.57	22,265,175.22	25,434,257.74	35,196,388.35	38,963,826.11
3,750,162.28	4,788,645.03	5,491,858.93	6,512,813.92	7,328,858.69
373,871.89	577,584.06	800,249.05	1,543,434.12	2,929,603.94
4,124,034.17	5,366,299.09	6,292,107.98	8,056,248.04	10,258,462.63
1,328,657.68	1,440,157.52	1,860,079.53	3,104,591.15	2,852,038.38
1,754,020.37	2,246,474.47	2,541,718.35	3,416,231.45	3,896,261.28
2,888,251.40	3,297,325.64	3,983,815.63	5,353,375.10	6,921,956.50
5,970,929.45	6,983,956.63	8,385,613.51	11,874,197.70	13,670,256.16
30,722,860.19	34,615,360.94	40,111,979.23	55,126,834.09	62,892,544.90
67.9	65.4	64.7	65.6	64.9

## STATEMENT

## Balance Sheets of Electrical Departments of

NIAGARA  
SYSTEM

Municipality Population	Acton 1,742	†Agincourt	Ailsa Craig 547	Alvinston 659	Ancaster Township
ASSETS	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Lands and buildings.....	1,545.45			126.06	
Substation equipment.....	1,617.63				
Distribution system, overhead....	12,541.57	5,578.26	7,020.34	13,556.74	16,104.41
Distribution system, underground					
Line transformers.....	6,748.95	1,535.28	2,112.18	3,449.78	4,735.64
Meters.....	5,579.18	1,190.27	1,663.99	2,868.87	6,352.87
Street light equipment, regular...	1,094.07	433.93	360.97	1,090.62	705.86
Street light equip., ornamental....					
Misc. construction expense.....	1,674.00	Cr. 104.91	492.36	918.68	1,147.70
Steam or hydraulic plant.....					
Old plant.....	3,481.50			813.85	
Total plant.....	34,282.35	8,632.83	11,649.84	22,824.60	29,046.48
Bank and cash balance.....		867.56	1,564.00	1,259.07	3,523.79
Securities and investments.....	1,000.00		2,000.00		
Accounts receivable.....	2,890.33	274.75	83.42	2,200.78	
Inventories.....	1,821.24			18.83	
Sinking fund on local debentures..					
Equity in Hydro systems.....	4,971.16	49.24	2,200.41	214.38	1,108.19
Other assets.....					
Total assets.....	44,965.08	9,824.38	17,497.67	26,517.66	33,678.46
Deficit.....					
Total.....	44,965.08	9,824.38	17,497.67	26,517.66	33,678.46
LIABILITIES					
Debenture balance.....	5,247.71	7,770.91	3,490.24	22,392.91	16,059.32
Accounts payable.....	310.36		154.74		2,762.62
Bank overdraft.....	832.67				
Other liabilities.....				49.64	
Total liabilities.....	6,390.74	7,770.91	3,644.98	22,442.55	18,821.94
RESERVES					
For depreciation.....	6,484.04	173.00	2,528.33	419.00	3,559.19
For equity in H.E.P.C. systems...	4,971.16	49.24	2,200.41	214.38	1,108.19
Total reserves.....	11,455.20	222.24	4,728.74	633.38	4,667.38
SURPLUS					
Debentures paid.....	9,252.29	301.74	743.99	1,136.33	940.68
Local sinking fund.....					
Additional operating surplus.....	17,866.85	1,529.49	8,379.96	2,305.40	9,248.46
Total surplus.....	27,119.14	1,831.23	9,123.95	3,441.73	10,189.14
Total liabilities, reserves & surplus	44,965.08	9,824.38	17,497.67	26,517.66	33,678.46
Percentage of net debt to total assets	15.9	79.4	23.8	85.3	57.7

\* 11 months operation.

† 13 " "

“A”

## Hydro Municipalities as at December 31, 1923

Aylmer 2,251	Ayr 817	Baden P. V.	Barton Twp.	Beachville P. V.	*Belle River 580	Blenheim 1,580	Bolton 658
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
.....	125.00	660.64	.....	176.13	.....	.....	.....
16,265.03	7,277.99	5,494.62	42,639.98	9,238.40	9,518.40	14,922.67	9,532.37
4,535.16	1,855.72	2,020.18	5,962.69	2,328.90	1,948.60	5,769.28	5,816.65
6,858.29	2,252.00	1,780.38	11,513.41	1,948.51	1,265.49	5,977.27	2,725.63
1,193.86	370.47	394.50	212.01	355.87	631.92	1,171.87	561.14
1,051.86	809.79	.....	2,545.60	533.36	725.49	1,492.13	982.60
14,719.17	4,002.53	.....	15,397.62	.....	.....	602.17	.....
44,623.37	16,693.50	10,350.32	78,271.31	14,581.17	14,089.90	30,845.03	21,172.99
954.35	726.06	6,385.82	4,928.76	194.49	9.60	893.52	1,015.45
12,000.00	1,000.00	.....	.....	8,000.00	.....	.....	.....
3,295.51	2,722.16	.....	.....	1,668.10	3,142.24	1,109.69	479.68
.....	107.95	51.80	.....	87.26	.....	.....	.....
1,434.14	1,538.35	4,723.22	.....	5,372.48	81.54	3,312.52	3,003.75
62,307.37	22,788.02	21,511.16	83,200.07	29,903.50	17,323.28	36,160.76	25,671.87
62,307.37	22,788.02	21,511.16	83,200.07	29,903.50	17,323.28	36,160.76	26,670.38
30,389.17	6,732.62	3,802.11	44,619.28	4,096.50	8,500.00	12,247.31	10,330.78
60.00	.....	782.86	15,988.81	84.50	1,247.86	.....	7,620.20
.....	.....	.....	10,961.32	.....	.....	1,482.97	.....
30,449.17	6,732.62	4,584.97	71,569.41	4,181.00	9,747.86	13,730.28	17,950.98
4,253.38	3,642.00	2,544.20	2,484.00	4,429.50	267.00	5,691.70	5,218.30
1,434.14	1,538.35	4,723.22	.....	5,372.48	81.54	3,312.52	3,003.75
5,687.52	5,180.35	7,267.42	2,484.00	9,801.98	348.54	9,004.22	8,222.05
8,312.75	5,770.76	1,197.89	8,803.38	1,256.50	.....	1,752.69	2,169.22
17,857.93	5,104.29	8,460.88	343.28	14,664.02	7,226.88	11,673.57	.....
26,170.68	10,875.05	9,658.77	9,146.66	15,920.52	7,226.88	13,426.26	2,169.22
62,307.37	22,788.02	21,511.16	83,200.07	29,903.50	17,323.28	36,160.76	28,342.25
50.0	31.6	27.3	86.0	17.0	56.5	41.8	79.1



## STATEMENT

## Balance Sheets of Electrical Departments of

NIAGARA  
SYSTEM—Continued

Municipality Population	Bothwell 613	Brampton 4,407	Brantford 31,362	Brantford Township	Brigden P. V.
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
<b>ASSETS</b>					
Lands and buildings.....		3,854.06	36,140.39		101.03
Substation equipment.....		9,601.84	108,792.96	1,297.71	
Distribution system, overhead....	3,944.76	41,415.51	181,329.89	36,615.04	5,518.59
Distribution system, underground.....					
Line transformers.....	1,299.02	15,420.42	81,700.50	10,705.90	1,108.30
Meters.....	2,253.54	15,742.08	82,429.82	7,009.68	1,597.69
Street light equipment, regular....	341.99	2,170.44	22,057.96	2,224.57	223.35
Street light equip., ornamental....			34,014.54		
Misc. construction expense.....	501.90	3,056.51	29,217.30	4,110.17	850.83
Steam or hydraulic plant.....					
Old plant.....		15,000.00			1,381.00
Total plant.....	8,341.21	106,260.86	575,683.36	61,963.07	10,780.79
Bank and cash balance.....	4,417.41	442.34	8,550.68	4,088.76	1,026.59
Securities and investments.....	2,000.00	30,617.08		1,000.00	
Accounts receivable.....	1,782.65	246.64	9,077.62	1,712.64	834.29
Inventories.....		44.08	933.48	333.60	
Sinking fund on local debentures.....			80,535.69	745.63	
Equity in Hydro systems.....	3,156.75	17,717.64	50,874.55		838.32
Other assets.....	1,057.01				
Total assets.....	20,755.03	155,328.64	725,655.38	69,843.70	13,479.99
Deficit.....					
Total.....	20,755.03	155,328.64	725,655.38	69,843.70	13,479.99
<b>LIABILITIES</b>					
Debenture balance.....	4,374.03	45,097.70	389,250.00	49,271.96	3,051.49
Accounts payable.....		870.76	11,772.64		2,000.04
Bank overdraft.....					
Other liabilities.....	1,057.01		41,993.50	1,050.78	
Total liabilities.....	5,431.04	45,968.46	443,016.14	50,322.74	5,051.53
<b>RESERVES</b>					
For depreciation.....	2,966.86	33,260.97	87,672.57	7,644.99	1,399.00
For equity in H.E.P.C. systems..	3,156.75	17,717.64	50,874.55		838.32
Total reserves.....	6,123.61	50,978.61	138,547.12	7,644.99	2,237.32
<b>SURPLUS</b>					
Debentures paid.....	1,160.16	23,952.94	15,750.00	7,853.70	4,948.51
Local sinking fund.....			80,535.69	745.63	
Additional operating surplus.....	8,040.22	34,428.63	47,806.43	3,276.64	1,242.63
Total surplus.....	9,200.38	58,381.57	144,092.12	11,875.97	6,191.14
Total liabilities, reserves & surplus.....	20,755.03	155,328.64	725,655.38	69,843.70	13,479.99
Percentage of net debt to total assets	30.8	33.4	65.6	72.0	39.9

## "A"—Continued

## Hydro Municipalities as at December 31, 1923

Burford P. V.	Burgess- ville, P. V.	Caledonia 1,335	Chatham 15,084	Chippawa 1,029	Clinton 1,941	Comber P. V.	Dashwood P. V.
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
202.00			39,378.86				
5,586.09	2,191.96	7,926.46	60,380.53		7,544.43		
			110,787.90	12,893.47	16,859.81	4,847.18	1,863.82
1,598.69	687.19	1,619.38	61,577.80	2,505.32	5,199.73	2,670.63	953.68
2,401.21	628.09	2,457.54	55,003.48	2,287.70	5,992.12	1,604.98	945.55
376.89	156.07	662.35	8,351.91	529.10	938.42	199.55	301.52
			26,921.73				
644.50	453.00	473.20	28,581.04	794.52	3,553.50	957.54	291.87
			47,037.51		10,728.09		
10,809.38	4,116.31	13,138.93	438,020.76	19,010.11	50,816.10	10,279.88	4,356.44
2,213.96	1,228.62	713.36	50.00	2,947.02		520.00	4.68
		1,000.00					
1,928.77	295.77	373.97	43,512.21	276.91	2,703.52	1,289.16	99.28
165.18			13,827.33		3,656.18		
					9,364.72		
1,259.59	380.61	1,482.06	23,300.46	645.03	4,296.58	1,758.04	632.61
16,376.88	6,021.31	16,708.32	518,710.76	22,879.07	70,837.10	13,847.08	5,093.01
16,376.88	6,021.31	16,708.32	518,710.76	22,879.07	70,837.10	13,847.08	5,093.01
7,325.71	2,557.47	3,655.53	241,149.26	12,144.81	40,500.00	5,553.37	3,012.08
23.48	194.40	46	41,998.36	1,564.97		59.23	31
			21,884.04		900.77		
			27,027.69				
7,349.19	2,751.87	3,655.99	332,059.35	13,709.78	41,400.77	5,612.60	3,012.39
2,120.00	998.30	3,262.76	51,178.20	1,520.66	9,941.18	1,860.42	829.13
1,259.59	380.61	1,482.06	23,300.46	645.03	4,296.58	1,758.04	632.61
3,379.59	1,378.91	4,744.82	74,478.66	2,165.69	14,237.76	3,618.46	1,461.74
1,674.29	942.53	968.47	28,850.74	1,205.19		2,146.63	387.92
					9,364.72		
3,973.81	948.00	7,339.04	83,322.01	5,798.41	5,833.85	2,469.39	230.96
5,648.10	1,890.53	8,307.51	112,172.75	7,003.60	15,198.57	4,616.02	618.88
16,376.88	6,021.31	16,708.32	518,710.76	22,879.07	70,837.10	13,847.08	5,093.01
48.6	48.7	24.0	67.0	61.6	62.2	46.4	67.5

# STATEMENT

## Balance Sheets of Electrical Departments of

### NIAGARA SYSTEM—Continued

Municipality Population	Delaware P. V.	Dereham Township	Dorchester P. V.	Drayton 618	Dresden 1,456
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
<b>ASSETS</b>					
Lands and buildings.....					523.00
Substation equipment.....					10,535.58
Distribution system, overhead....	2,403.21	9,485.72	4,886.44	6,277.01	
Distribution system, underground.....					
Line transformers.....	216.75	11,962.25	2,525.25	1,805.63	4,980.38
Meters.....	623.85	3,381.03	1,823.91	2,045.32	4,538.52
Street light equipment, regular....	106.93		245.41	569.63	880.52
Street light equip., ornamental....					
Misc. construction expense.....	203.81	494.46	328.41	388.37	408.09
Steam or hydraulic plant.....					
Old plant.....					4,815.01
Total plant.....	3,554.55	25,323.46	9,809.42	11,085.96	26,681.10
Bank and cash balance.....	278.17	1,582.48	2,920.86	504.46	404.94
Securities and investments.....				4,000.00	5,000.00
Accounts receivable.....	2,669.80	598.84	236.26	261.21	924.45
Inventories.....			28.31	97.68	764.43
Sinking fund on local debentures.....					
Equity in Hydro systems.....	327.48	3,795.31	517.94	377.56	2,677.13
Other assets.....					
Total assets.....	6,830.00	31,300.09	13,512.79	16,326.87	36,452.05
Deficit.....		5,571.21			
Total.....	6,830.00	36,871.30	13,512.79	16,326.87	36,452.05
<b>LIABILITIES</b>					
Debenture balance.....	3,336.01	19,260.24	3,682.01	8,661.80	10,224.99
Accounts payable.....	394.85	5,812.70	102.31		
Bank overdraft.....					
Other liabilities.....	35.77				
Total liabilities.....	3,766.63	25,072.94	3,784.32	8,661.80	10,224.99
<b>RESERVES</b>					
For depreciation.....	812.91	6,559.91	1,895.70	1,787.40	4,330.05
For equity in H.E.P.C. systems..	327.48	3,795.31	517.94	377.56	2,677.13
Total reserves.....	1,140.39	10,355.22	2,413.64	2,164.96	7,007.18
<b>SURPLUS</b>					
Debentures paid.....	663.99	1,443.14	617.99	838.20	6,013.26
Local sinking fund.....					
Additional operating surplus.....	1,258.99		6,696.84	4,661.91	13,206.62
Total surplus.....	1,922.98	1,443.14	7,314.83	5,500.11	19,219.88
Total liabilities, reserves & surplus.....	6,830.00	36,871.30	13,512.79	16,326.87	36,452.05
Percentage of net debt to total assets	57.9	91.1	29.1	54.3	30.2



## "A"—Continued

## Hydro Municipalities as at December 31, 1923

Drumbo P. V.	Dublin P. V.	Dundas 5,100	Dunnville 3,583	Dutton 845	Elmira 2,370	Elora 1,091	Embro 463
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
.....	85.00	8,519.52	3,379.78	.....	4,101.08	1,438.42	.....
3,061.54	4,134.25	10,828.92	16,916.68	.....	.....	.....	.....
.....	.....	47,341.28	26,845.69	7,154.06	18,876.20	12,210.30	6,080.35
860.02	660.75	14,610.86	10,366.16	2,039.78	9,164.96	5,248.21	1,738.56
995.24	563.81	16,497.27	7,453.67	2,892.98	7,733.76	3,659.73	1,287.39
201.80	426.53	1,736.00	2,320.25	516.26	1,081.56	501.34	223.37
.....	.....	4,767.47	.....	.....	.....	.....	.....
239.58	787.06	6,813.37	4,988.29	288.17	2,421.23	926.18	69.45
.....	.....	1,867.38	10,717.62	.....	2,325.08	1,425.47	429.25
5,358.18	6,657.40	108,214.60	87,755.61	12,891.25	45,703.87	25,409.65	9,828.37
429.05	301.30	9,247.99	.....	461.33	503.07	2,375.57	590.66
600.00	.....	.....	.....	1,500.00	.....	.....	1,000.00
806.95	.....	2,970.23	2,939.13	3,401.24	3,447.77	1,508.12	.....
.....	.....	2,100.01	841.21	106.01	1,745.37	915.10	26.65
587.48	217.59	15,607.75	2,124.36	1,853.99	6,341.52	4,662.40	1,726.86
7,781.66	7,176.29	138,140.58	93,660.31	20,213.82	57,741.60	34,870.84	13,172.54
.....	1,452.18	.....	.....	.....	.....	.....	.....
7,781.66	8,628.47	138,140.58	93,660.31	20,213.82	57,741.60	34,870.84	13,172.54
3,753.13	4,850.43	42,548.69	59,181.15	7,415.50	16,665.54	9,630.57	6,608.08
40.47	1,031.88	3,265.93	3,914.47	13.25	.....	.....	1,112.67
.....	.....	.....	1,234.73	.....	141.00	.....	.....
3,793.60	5,882.31	45,814.62	64,330.35	7,428.75	16,806.54	9,630.57	7,720.75
1,304.00	1,179.00	27,645.86	10,491.56	3,212.00	8,425.33	6,243.80	2,799.39
587.48	217.59	15,607.75	2,124.36	1,853.99	6,341.52	4,662.40	1,726.86
1,891.48	1,396.59	43,253.61	12,615.92	5,065.99	14,766.85	10,906.20	4,526.25
746.87	1,349.57	10,451.31	6,318.85	991.99	3,334.46	3,369.43	891.91
1,349.71	.....	38,621.04	10,395.19	6,727.09	22,833.75	10,964.64	33.63
2,096.58	1,349.57	49,072.35	16,714.04	7,719.08	26,168.21	14,334.07	925.54
7,781.66	8,628.47	138,140.58	93,660.31	20,213.82	57,741.60	34,870.84	13,172.54
52.7	84.5	37.4	70.2	36.7	32.7	31.9	67.4

## STATEMENT

## Balance Sheets of Electrical Departments of

NIAGARA  
SYSTEM—Continued

Municipality Population	Etobicoke Twp.	Exeter 1,507	Fergus 1,762	Ford City 5,113	Forest 1,422
ASSETS	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Lands and buildings.....		2,683.93			5,228.77
Substation equipment.....					
Distribution system, overhead....	92,873.68	14,736.87	17,192.14	50,631.50	13,843.89
Distribution system, underground					
Line transformers.....	24,399.37	4,447.73	7,719.39	19,258.23	4,081.43
Meters.....	32,631.52	4,965.55	6,936.21	19,618.51	6,610.33
Street light equipment, regular	6,400.29	868.56	1,249.57		2,000.02
Street light equip., ornamental....					
Misc. construction expense.....	2,994.33	1,575.28	516.30	1,662.28	392.70
Steam or hydraulic plant.....					
Old plant.....			2,546.59		11,084.87
Total plant.....	159,299.19	29,277.92	36,160.20	91,170.52	43,242.01
Bank and cash balance.....	12,391.12	1,783.00	1,887.45		405.17
Securities and investments.....			1,500.00		4,000.00
Accounts receivable.....	9,631.22	4,088.58	2,556.82	15,329.50	2,297.05
Inventories.....	420.59	2,288.43	635.10		3,936.60
Sinking fund on local debentures..					
Equity in Hydro systems.....	11,865.59	4,901.71	3,886.13	4,889.79	1,471.92
Other assets.....	177.52				
Total assets.....	193,785.23	42,339.64	46,625.70	111,389.81	55,352.75
Deficit.....					
Total.....	193,785.23	42,339.64	46,625.70	111,389.81	55,352.75
LIABILITIES					
Debenture balance.....	107,168.88	15,998.48	27,513.62	87,287.37	22,653.98
Accounts payable.....	263.64	79.68	158.79	4,776.66	527.20
Bank overdraft.....					
Other liabilities.....	1,941.05				
Total liabilities.....	109,373.57	16,078.16	27,672.41	92,064.03	23,181.18
RESERVES					
For depreciation.....	26,936.86	4,995.40	6,541.85	4,596.17	5,173.97
For equity in H.E.P.C. systems..	11,865.59	4,901.71	3,886.13	4,889.79	1,471.92
Total reserves.....	38,802.45	9,897.11	10,427.98	9,485.96	6,645.89
SURPLUS					
Debentures paid.....	8,831.12	4,001.57	2,486.38	1,712.63	11,746.02
Local sinking fund.....					
Additional operating surplus.....	36,778.09	12,362.80	6,038.93	8,127.19	13,779.66
Total surplus.....	45,609.21	16,364.37	8,525.31	9,839.82	25,525.68
Total liabilities, reserves & surplus	193,785.23	42,339.64	46,625.70	111,389.81	55,352.75
Percentage of net debt to total assets	60.1	42.9	64.7	86.4	43.0

## "A"—Continued

## Hydro Municipalities as at December 31, 1923

Galt 13,332	Georgetown 2,098	Glencoe 835	Goderich 4,108	Grantham Twp.	Granton P. V.	Guelph 18,027	Hagersville 1,271
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
192,684.51	12.00		12,957.48			12,004.40	
152,616.82			9,795.28			86,839.69	864.37
191,252.47	21,866.32	15,201.34	44,709.63	10,178.44	3,317.45	115,093.42	13,125.24
43,354.98	12,683.81	2,992.88	14,003.96	5,947.18	775.97	57,879.90	3,264.61
53,846.19	8,269.60	3,052.89	11,954.42	2,451.66	933.70	53,891.21	4,999.66
10,748.10	1,108.60	1,647.22	4,244.76		149.27	31,226.21	659.82
60,041.09							
25,982.32	1,509.08	3,205.05	4,116.13	267.30	113.08	14,730.88	140.20
	2,209.80	Cr. 330.71	14,622.15				
730,526.48	47,659.21	25,768.67	116,403.81	18,844.58	5,289.47	371,665.71	23,053.90
175.00	2,244.51	1,219.62	4,194.36		2,852.78		3,089.83
	11,819.24					25,000.00	2,000.00
42,511.61	3,693.82	1,956.85	11,346.88	4,404.34	111.37	28,226.30	979.11
18,651.19	1,452.57		798.88			33,465.71	98.43
86,335.19		1,716.72	5,117.95	2,605.71		23,006.02	
56,149.36	11,944.66	481.99	13,206.15	5,148.07	772.17	61,055.71	6,384.72
934,348.83	78,814.01	31,143.85	151,068.03	31,002.70	9,025.79	542,419.45	35,605.99
934,348.83	78,814.01	31,143.85	151,068.03	31,002.70	9,025.79	542,419.45	35,605.99
506,681.69	16,665.53	18,477.45	37,553.45	10,564.11	3,061.82	90,147.59	6,197.15
17,845.46		16.90	21,781.03	6,762.28	653.01	17,158.53	
81,641.07				1,019.46		34,247.35	
1,500.00						1,509.91	
607,668.22	16,665.53	18,494.35	59,334.48	18,345.85	3,714.83	143,063.38	6,197.15
56,149.36	14,887.25	1,673.82	30,805.11	3,642.11	1,073.05	68,715.97	777.44
88,870.43	11,944.66	481.99	13,206.15	5,148.07	772.17	61,055.71	6,384.72
145,019.79	26,831.91	2,155.81	44,011.26	8,790.18	1,845.22	129,771.68	7,162.16
11,320.26	3,334.47	1,635.43	18,534.60	435.89	438.18	54,852.40	1,802.85
86,335.19		1,716.72	5,117.95	2,605.71		23,006.02	
84,005.37	31,982.10	7,141.54	24,069.74	825.07	3,027.56	191,725.97	20,443.83
181,660.82	35,316.57	10,493.69	47,722.29	3,866.67	3,465.74	269,584.39	22,246.68
934,348.83	78,814.01	31,143.85	151,068.03	31,002.70	9,025.79	542,419.45	35,605.99
69.2	21.1	60.3	43.0	70.9	45.0	29.7	21.2



# STATEMENT

## Balance Sheets of Electrical Departments of

### NIAGARA SYSTEM—Continued

Municipality	Hamilton	Harriston	Hensall	Hespeler	Highgate
Population	118,243	1,311	738	2,853	417
<b>ASSETS</b>	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Lands and buildings.....	565,042.53			3,521.37	
Substation equipment.....	154,690.56	600.00		12,957.25	
Distribution system, overhead....	528,418.80	10,548.11	6,982.32	22,858.12	3,897.96
Distribution system, underground	285,807.90				
Line transformers.....	292,434.07	4,164.83	2,450.22	10,778.71	1,488.37
Meters.....	311,433.34	3,972.34	2,500.13	9,262.64	1,268.57
Street light equipment, regular...	103,845.35	350.00	436.67	1,645.72	294.56
Street light equip., ornamental....					
Misc. construction expense.....	146,996.99	644.74	447.50	446.33	496.84
Steam or hydraulic plant.....					
Old plant.....	2,000.00	1,130.83	400.00	2,129.87	
Total plant.....	2,390,669.54	21,410.85	13,216.84	63,600.01	7,446.30
Bank and cash balance.....	52,095.12	2,250.67	2,639.48	1,176.11	2,668.78
Securities and investments.....					
Accounts receivable.....	252,205.53	754.01	718.99	1,923.75	499.46
Inventories.....	98,308.13	300.00			50.00
Sinking fund on local debentures.	264,353.24				
Equity in Hydro systems.....	227,823.38	2,897.78	1,673.26	7,867.85	993.24
Other assets.....	1,589.03				
Total assets.....	3,287,043.97	27,613.31	18,248.57	74,567.72	11,657.78
Deficit.....					
Total.....	3,287,043.97	27,613.31	18,248.57	74,567.72	11,657.78
<b>LIABILITIES</b>					
Debenture balance.....	1,711,972.66	13,806.64	10,620.34	27,015.56	4,387.25
Accounts payable.....	420,576.12	117.76	1,180.84	4,534.00	
Bank overdraft.....					
Other liabilities.....	76,238.71			412.50	
Total liabilities.....	2,208,787.49	13,924.40	11,801.18	31,962.06	4,387.25
<b>RESERVES</b>					
For depreciation.....	398,615.35	3,893.40	2,890.45	3,902.50	1,419.00
For equity in H.E.P.C. systems..	227,823.38	2,897.78	1,673.26	7,867.85	993.24
Total reserves.....	626,438.73	6,791.18	4,563.71	11,770.35	2,412.24
<b>SURPLUS</b>					
Debentures paid.....	58,027.34	4,511.39	1,379.66	20,554.95	612.75
Local sinking fund.....	264,353.24				
Additional operating surplus.....	129,437.17	2,386.34	504.02	10,280.36	4,245.54
Total surplus.....	451,817.75	6,897.73	1,883.68	30,835.31	4,858.29
Total liabilities, reserves & surplus	3,287,043.97	27,613.31	18,248.57	74,567.72	11,657.78
Percentage of net debt to total assets	72.2	56.3	71.1	47.9	41.1

## “A”—Continued

## Hydro Municipalities as at December 31, 1923

Ingersoll 5,253	Kitchener 22,717	Lambeth P. V.	Listowel 2,429	London 59,784	London Twp.	Louth Twp.	Lucan 624
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
11,117.21	48,001.87		1,283.96	325,952.69			
10,302.31	130,503.49			428,384.64			
42,110.69	170,727.10	5,021.51	27,611.68	664,639.35	3,151.76	1,976.16	7,482.41
	28,719.93			82,439.52			
17,061.09	101,204.13	657.71	12,527.28	118,565.73	1,114.40	2,476.55	3,143.13
19,493.61	108,055.10	1,515.55	11,232.27	235,043.09	1,066.80	627.45	2,506.29
2,762.09	29,203.42	167.40	1,238.10	37,804.59			372.54
4,597.59			5,772.22	12,830.65			
9,433.40	13,321.09	300.71	1,571.16	76,180.09	429.31	Cr. 126.84	445.77
20,250.88	52,398.91		4,745.30		3,733.80		2,860.45
137,128.87	682,135.04	7,662.88	65,981.97	1,981,840.35	9,496.07	4,953.32	16,810.59
3,297.14	1,649.06	110.32	2,277.52	1,546.67	3,500.17	117.23	2,755.48
19,335.26	22,000.00						7,000.00
11,238.04	37,552.51	1,218.53	3,012.73	214,451.55	2,153.88	365.70	59.97
2,158.57	21,265.22			69,906.17			43.97
28,599.56				176,922.67			
19,838.70	108,721.96	694.34	4,801.42	219,000.77		340.84	2,535.96
		79.10		175,000.00			
221,596.14	873,323.79	9,765.17	76,073.64	2,838,668.18	15,150.12	5,777.09	29,205.97
						285.84	
221,596.14	873,323.79	9,765.17	76,073.64	2,838,668.18	15,150.12	6,062.93	29,205.97
79,800.00	254,003.55	3,499.24	29,479.25	1,204,175.38	12,608.10	1,738.84	8,370.00
7,659.42	47,741.31	111.00	1,694.29	231,983.12		3,332.93	330.56
	12,744.83			101,764.44			
4,597.59	48,066.95		5,742.30	22,992.79			
92,057.01	362,556.64	3,610.24	36,915.84	1,560,915.73	12,608.10	5,071.77	8,700.56
21,202.08	129,978.52	1,388.44	9,286.95	389,456.55	1,500.00	439.16	3,495.53
19,838.70	108,721.96	694.34	4,801.42	219,000.77		340.84	2,535.96
41,040.78	238,700.48	2,082.78	14,088.37	608,457.32	1,500.00	780.00	6,031.49
	126,146.45	500.76	13,710.64	92,724.62	891.90	211.16	2,843.62
28,599.56				176,922.67			
59,898.79	145,920.22	3,571.39	11,358.79	399,647.84	150.12		11,630.30
88,498.35	272,066.67	4,072.15	25,069.43	669,295.13	1,042.02	211.16	14,473.92
221,596.14	873,323.79	9,765.17	76,073.64	2,838,668.18	15,150.12	6,062.93	29,205.97
45.6	47.4	38.9	51.8	59.5	83.2	93.2	32.6

## STATEMENT

## Balance Sheets of Electrical Departments of

**NIAGARA  
SYSTEM—Continued**

Municipality Population	Lynden P. V.	Markham 970	*Merlin P. V.	Merritton 2,589	Milton 1,900
<b>ASSETS</b>	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Lands and buildings.....	241.18			350.00	
Substation equipment.....				3,889.63	5,550.19
Distribution system, overhead....	2,777.52	9,259.72	7,599.07	12,919.75	14,007.31
Distribution system, underground					
Line transformers.....	1,094.69	3,869.76	2,145.28	3,076.42	7,386.15
Meters.....	942.81	3,037.80	1,530.02	6,880.65	7,207.11
Street light equipment, regular...	163.30	467.33	464.14	1,407.25	986.67
Street light equip., ornamental...					
Misc. construction expense.....	193.57	1,113.39	459.12	2,076.47	2,514.23
Steam or hydraulic plant.....					
Old plant.....		11.03	275.00		4,065.85
Total plant.....	5,413.07	17,759.03	12,472.63	30,600.17	41,717.51
Bank and cash balance.....	1,313.61	1,787.04	1,412.26	2,932.87	8,071.15
Securities and investments.....		1,000.00			5,000.00
Accounts receivable.....	610.85	447.12	1,619.31	178.01	5,717.22
Inventories.....				116.75	1,135.30
Sinking fund on local debentures.					
Equity in Hydro systems.....	2,138.12	484.84	176.99	1,733.57	12,244.95
Other assets.....					584.55
Total assets.....	9,475.65	21,478.03	15,681.19	35,561.37	74,470.68
Deficit.....					
Total.....	9,475.65	21,478.03	15,681.19	35,561.37	74,470.68
<b>LIABILITIES</b>					
Debenture balance.....	3,892.05	9,222.22	8,273.80	3,474.06	11,385.12
Accounts payable.....		460.24	4,444.57	703.66	15,857.59
Bank overdraft.....					
Other liabilities.....					
Total liabilities.....	3,892.05	9,682.46	12,718.37	4,177.72	27,242.71
<b>RESERVES</b>					
For depreciation.....	1,411.00	1,443.25		2,127.00	10,349.24
For equity in H.E.P.C. systems..	2,138.12	484.84	176.99	1,733.57	12,244.95
Total reserves.....	3,549.12	1,928.09	176.99	3,860.57	22,594.19
<b>SURPLUS</b>					
Debentures paid.....	602.95	2,336.61	231.20	1,712.15	13,327.86
Local sinking fund.....					
Additional operating surplus.....	1,431.53	7,530.87	2,554.63	25,810.93	11,305.92
Total surplus.....	2,034.48	9,867.48	2,785.83	27,523.08	24,633.78
Total liabilities, reserves & surplus	9,475.65	21,478.03	15,681.19	35,561.37	74,470.68
Percentage of net debt to total assets	53.0	46.1	82.0	11.7	43.7

\* Eleven months' operation.



## “A”—Continued

## Hydro Municipalities as at December 31, 1923

Milverton 1,054	Mimico 4,187	Mitchell 1,699	Moorefield P. V.	Mount Brydges P. V.	Newbury 301	New Hamburg 1,401	New Toronto 2,947
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
237.20	10,195.15	10,594.81				2,317.59	395.00
	2,509.15	11,493.01				1,083.10	
8,304.40	41,292.87	17,314.52	2,630.04	3,337.60	5,837.25	13,333.58	41,736.38
5,800.97	15,492.03	6,806.00	857.72	984.37	1,036.62	5,190.15	11,614.18
3,184.81	16,526.61	7,518.80	618.25	1,417.27	696.90	5,424.45	12,996.07
562.24	2,846.74	2,133.42	295.88	120.09	765.45	1,303.76	3,447.80
557.93	2,502.99	410.13	348.35	143.82	485.13	1,017.60	2,220.33
		1,500.00			348.22	5,242.56	
18,647.55	91,365.54	57,770.69	4,750.24	6,003.15	9,169.57	34,912.79	72,409.76
75.62	8,212.24	2,269.64	939.94	2,183.19	120.84	905.95	2,220.49
	1,257.97	2,000.00					
5,230.42	226.75	1,062.37	45.92	1,434.41	1,459.69	5,272.55	10,694.81
		620.36		34.41		1,306.68	997.40
3,698.49	7,113.31	5,926.69	221.45	895.18	147.21	6,427.16	32,688.92
27,652.08	108,175.81	69,649.75	5,957.55	10,550.34	10,897.31	48,825.13	119,011.38
27,652.08	108,175.81	69,649.75	5,957.55	10,550.34	10,897.31	48,825.13	119,011.38
6,850.83	38,170.34	5,125.97	3,629.03	3,564.10	8,400.00	13,201.13	6,485.55
3,633.37	27,330.22	496.23					32.26
	295.00						2,392.16
							638.30
10,484.20	65,795.56	5,622.20	3,629.03	3,564.10	8,400.00	13,201.13	9,548.27
2,800.21	15,984.30	15,244.55	612.90	1,460.00	338.00	10,337.00	12,173.02
3,698.49	7,113.31	5,926.69	221.45	895.18	147.21	6,427.16	32,688.92
6,498.70	23,097.61	21,171.24	834.35	2,355.18	485.21	16,764.16	44,861.94
2,649.17	7,829.66	17,169.25	870.97	655.90	1,354.39	4,527.95	1,514.45
8,020.01	11,452.98	25,687.06	623.20	3,975.16	657.71	14,331.89	63,086.72
10,669.18	19,282.64	42,856.31	1,494.17	4,631.06	2,012.10	18,859.84	64,601.17
27,652.08	108,175.81	69,649.75	5,957.55	10,550.34	10,897.31	48,825.13	119,011.38
43.7	65.1	8.8	63.2	36.9	78.1	27.1	11.0

## STATEMENT

## Balance Sheets of Electrical Departments of

NIAGARA  
SYSTEM—Continued

Municipality Population	Niagara Falls 15,895	Niagara on-the-lake 1,714	Norwich 1,307	N. Norwich Twp.	S. Norwich Twp.
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
<b>ASSETS</b>					
Lands and buildings.....	116,937.80	200.00	922.30		
Substation equipment.....	91,083.27	1,148.47			
Distribution system, overhead....	121,978.37	14,724.17	8,335.80	1,111.96	1,989.03
Distribution system, underground					
Line transformers.....	87,107.23	3,164.31	4,153.74	3,627.17	2,411.09
Meters.....	73,757.73	3,965.36	5,415.01	1,018.34	479.00
Street light equipment, regular	18,339.50	698.30	1,096.10		
Street light equip., ornamental...	49,325.27		2,775.99		
Misc. construction expense.....	6,595.54	1,247.80	1,224.84	180.17	339.84
Steam or hydraulic plant.....					
Old plant.....	12,812.30		3,509.82		
Total plant.....	577,937.01	25,148.41	27,433.60	5,937.64	5,218.96
Bank and cash balance.....	600.00	462.86	2,285.12	88.36	
Securities and investments.....			6,000.00		
Accounts receivable.....	49,316.54	625.11	5,176.01		
Inventories.....	2,384.67	75.54	218.12		
Sinking fund on local debentures...					
Equity in Hydro systems.....	30,403.30	1,319.26	5,666.64		
Other assets.....	5,784.79				
Total assets.....	666,426.31	27,631.18	46,779.49	6,026.00	5,218.96
Deficit.....					
Total.....	666,426.31	27,631.18	46,779.49	6,026.00	5,218.96
<b>LIABILITIES</b>					
Debenture balance.....	309,068.66	6,600.77	10,608.60	4,897.26	4,140.84
Accounts payable.....	21,109.19	461.50			
Bank overdraft.....	66,158.63				
Other liabilities.....	6,284.79				
Total liabilities.....	402,621.27	7,062.27	10,608.60	4,897.26	4,140.84
<b>RESERVES</b>					
For depreciation.....	41,874.76	1,853.28	9,908.43		
For equity in H.E.P.C. systems..	30,403.30	1,319.26	5,666.64		
Total reserves.....	72,278.06	3,172.54	15,575.07		
<b>SURPLUS</b>					
Debentures paid.....	121,174.34	4,235.88	3,147.40	1,128.74	1,078.12
Local sinking fund.....					
Additional operating surplus.....	70,352.64	13,160.49	17,448.42		
Total surplus.....	191,526.98	17,396.37	20,595.82	1,128.74	1,078.12
Total liabilities, reserves & surplus	666,426.31	27,631.18	46,779.49	6,026.00	5,218.96
Percentage of net debt to total assets	63.3	26.8	25.8	81.2	79.3

“A”—Continued

Hydro Municipalities as at December 31, 1923

Oil Springs 491	Otterville P. V.	Palmer- ton 1,780	Paris 4,400	Parkhill 1,201	Petrolia 2,911	Plattsville P. V.	Point Edward 1,150
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
10,987.44	3,749.22	691.88 16,494.62	7,626.26 21,830.64 44,293.33	13,134.92	900.00 2,403.55	2,969.09	8,255.42
5,000.87	1,774.43	4,612.59	14,551.70	2,265.84	26,885.86 20,430.78	906.14	4,535.63
2,743.75	1,239.93	4,522.15	14,753.85	2,929.18	11,075.29	1,305.84	2,833.64
305.72	341.80	918.84	2,705.03	823.68	985.28	133.65	652.11
1,777.41	142.00	1,986.18	9,447.15 144.60	1,299.57	3,864.07 4,961.59	535.92	366.39
1,042.00		4,018.71	16,684.76		3,389.94		
21,857.19	7,247.38	33,244.97	132,037.32	20,453.19	74,896.36	5,850.64	16,643.19
2,036.06	1,762.46 2,000.00	1,322.53	3,024.21	3,368.12	4,000.00		
5,456.83	295.59	9,389.65	2,749.93	920.03	3,946.06	252.07	6,389.96
421.40	107.03	5,618.89	149.86		10,058.93		
1,444.35	473.61	2,595.26	25,186.87 8,945.52	416.70	7,665.46	2,195.23	1,471.53
31,215.83	11,886.07	52,171.30	172,093.71	25,158.04	100,566.81	8,297.94 2,203.88	24,504.68
31,215.83	11,886.07	52,171.30	172,093.71	25,158.04	100,566.81	10,501.82	24,504.68
13,747.08	3,289.24	11,536.33	55,645.12	13,118.97	41,879.81	4,367.83	5,116.72
3,482.35		535.21			1,320.27 1,177.28	24	8,872.83
17,229.43	3,289.24	12,071.54	55,645.12	13,118.97	43,057.09	5,688.34	13,989.55
2,257.31	1,463.60	5,466.12	29,822.00	1,475.00	11,844.06	1,749.08	3,281.00
1,444.35	473.61	2,595.26	8,945.52	416.70	7,665.46	2,195.23	1,471.53
3,701.66	1,937.21	8,061.38	38,767.52	1,891.70	19,509.52	3,944.31	4,752.53
2,974.23	1,210.76	15,463.67	36,354.88	1,511.05	8,120.19	869.17	1,883.28
7,310.51	5,448.86	16,574.71	25,186.87 16,139.32	8,636.32	29,880.01		3,879.32
10,284.74	6,659.62	32,038.38	77,681.07	10,147.37	38,000.20	869.17	5,762.60
31,215.83	11,886.07	52,171.30	172,093.71	25,158.04	100,566.81	10,501.82	24,504.68
57.8	28.8	24.3	32.3	53.0	46.3	93.2	60.7



# STATEMENT

## Balance Sheets of Electrical Departments of

### NIAGARA SYSTEM—Continued

Municipality Population	Port Colborne 3,123	Port Credit 1,119	Port Dalhousie 1,424	Port Dover 1,380	Port Stanley 717
<b>ASSETS</b>	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Lands and buildings.....		675.00			1,505.38
Substation equipment.....					
Distribution system, overhead....	38,587.94	13,432.97	10,811.97	20,183.83	15,156.59
Distribution system, underground					
Line transformers.....	10,570.07	3,696.60	4,521.05	4,725.86	5,652.30
Meters.....	10,844.46	4,570.20	6,125.17	2,729.16	3,081.21
Street light equipment, regular....	1,331.65	544.72	627.45	1,449.22	903.93
Street light equip., ornamental....					
Misc. construction expense.....	5,136.19	626.31	1,574.96	2,270.77	5,606.55
Steam or hydraulic plant.....					
Old plant.....	9,929.60		6,018.38		577.51
Total plant.....	76,399.91	23,545.80	29,678.98	31,358.84	32,483.47
Bank and cash balance.....	197.46		428.20		4,375.15
Securities and investments.....		2,600.00			
Accounts receivable.....	1,055.09	555.11	1,033.04	6.08	1,254.27
Inventories.....	7,814.49				
Sinking fund on local debentures....			335.96		
Equity in Hydro systems.....	3,698.74	2,060.53	2,004.69	351.67	5,857.05
Other assets.....					
Total assets.....	89,165.69	28,761.44	33,480.87	31,716.59	43,969.94
Deficit.....					
Total.....	89,165.69	28,761.44	33,480.87	31,716.59	43,969.94
<b>LIABILITIES</b>					
Debenture balance.....	60,346.69	5,702.94	18,754.22	19,182.58	14,065.07
Accounts payable.....	6,078.38	1,759.76	2,141.85	6,415.57	
Bank overdraft.....	1,552.45	41.42		50.39	
Other liabilities.....	165.00				
Total liabilities.....	68,142.52	7,504.12	20,896.07	25,648.54	14,065.07
<b>RESERVES</b>					
For depreciation.....	4,253.00	5,247.11	1,646.46	1,174.00	8,850.25
For equity in H.E.P.C. systems....	3,698.74	2,060.53	2,004.69	351.67	5,857.05
Total reserves.....	7,951.74	7,307.64	3,651.15	1,525.67	14,707.30
<b>SURPLUS</b>					
Debentures paid.....	5,653.31	2,797.06	3,745.78	1,817.42	4,884.93
Local sinking fund.....			335.96		
Additional operating surplus.....	7,418.12	11,152.62	4,851.91	2,724.96	10,312.64
Total surplus.....	13,071.43	13,949.68	8,933.65	4,542.38	15,197.57
Total liabilities, reserves & surplus	89,165.69	28,761.44	33,480.87	31,716.59	43,969.94
Percentage of net debt to total assets	79.7	28.1	66.4	81.7	36.9

## "A"—Continued

## Hydro Municipalities as at December 31, 1923

Preston 5,547	Princeton P. V.	Queenston P. V.	Ridgetown 2,267	Riverside 3,000	Rockwood P. V.	Rodney 756	St. Cath- arines 20,961
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
34,866.44			1,024.24		79.00		36,766.77
61,014.72	2,665.19	6,313.31	12,607.95	29,808.89	5,804.75	6,473.15	70,155.98
							152,861.51
33,937.52	630.92	1,076.50	6,006.60	8,876.82	1,211.93	1,494.68	68,780.99
26,309.18	667.64	1,090.47	5,957.86	7,563.30	1,696.91	2,546.33	54,776.03
3,798.64	116.30	395.59	896.88		440.98	546.92	14,111.17
3,560.33			1,319.10				24,521.46
6,066.06	64.35	1,948.71	661.80	2,942.87	308.05	695.00	37,141.20
23,549.22			5,088.46			700.00	
193,102.11	4,144.40	10,824.58	33,562.89	49,191.88	9,541.62	12,456.08	459,115.11
	87.84	738.76	4,059.08		62.34	340.48	484.40
			13,500.00			5,000.00	
6,912.57	346.43	33.09	2,075.43	3,715.49	458.98	1,011.62	15,627.79
		110.50	3,135.85		182.70		765.78
							28,920.15
28,439.67	827.20	226.71	3,700.48	1,081.65	1,570.55	715.42	27,373.88
228,454.35	5,405.87	11,933.64	60,033.73	53,989.02	11,816.19	19,523.60	532,287.11
	329.85						
228,454.35	5,735.72	11,933.64	60,033.73	53,989.02	11,816.19	19,523.60	532,287.11
51,086.28	2,960.81	7,551.99	12,762.00	40,930.77		7,529.97	206,400.52
	389.24	2,095.55	46.25	4,300.56	25.90	327.50	27,044.56
44,901.18			1,319.10				24,521.46
95,987.46	3,350.05	9,647.54	14,127.35	45,231.33	25.90	7,857.47	257,966.54
41,691.14	969.28	345.00	6,001.82	2,033.69	2,862.30	1,812.99	74,760.59
28,439.67	827.20	226.71	3,700.48	1,081.65	1,570.55	715.42	27,373.88
70,130.81	1,796.48	571.71	9,702.30	3,115.34	4,432.85	2,528.41	102,134.47
41,654.09	589.19	448.01	6,693.99	1,569.23	2,000.00	970.03	25,622.39
							28,920.15
20,681.99		1,266.38	29,510.09	4,073.12	5,357.44	8,167.69	117,643.56
62,336.08	589.19	1,714.39	36,204.08	5,642.35	7,357.44	9,137.72	172,186.10
228,454.35	5,735.72	11,933.64	60,033.73	53,989.02	11,816.19	19,523.60	532,287.11
47.9	73.1	82.4	25.0	85.4	0.2	41.7	51.0

## STATEMENT

## Balance Sheets of Electrical Departments of

NIAGARA  
SYSTEM—Continued

Municipality Population	St. Clair Beach 82	St. George P. V.	St. Jacobs P. V.	St. Marys 4,039	St. Thomas 17,892
ASSETS	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Lands and buildings.....				3,000.00	41,969.65
Substation equipment.....				23,878.71	80,551.41
Distribution system, overhead....	5,308.79	3,579.53	4,873.34	37,535.86	89,806.29
Distribution system, underground					11,868.96
Line transformers.....	1,514.68	1,175.69	1,502.72	14,545.24	37,390.39
Meters.....	658.68	1,674.88	1,372.68	16,895.15	51,709.24
Street light equipment, regular....		228.77	290.31	2,605.56	13,249.09
Street light equip., ornamental....					7,538.63
Misc. construction expense.....		374.18	452.22	3,635.14	6,191.89
Steam or hydraulic plant.....					
Old plant.....				20,696.85	
Total plant.....	7,482.15	7,033.05	8,491.27	122,792.51	340,275.55
Bank and cash balance.....		1,824.31	10.47	1,109.10	7,861.28
Securities and investments.....		5,500.00	3,000.00		13,206.81
Accounts receivable.....	1,412.43	331.94	322.85	5,622.65	27,178.93
Inventories.....		400.00		3,755.89	32,488.86
Sinking fund on local debentures.				5,959.71	
Equity in Hydro systems.....	161.65	1,309.39	490.06	17,404.63	50,549.12
Other assets.....					
Total assets.....	9,056.23	16,398.69	12,314.65	156,644.49	471,560.55
Deficit.....					
Total.....	9,056.23	16,398.69	12,314.65	156,644.49	471,560.55
LIABILITIES					
Debenture balance.....	6,171.80	5,067.59	4,814.59	49,563.97	80,964.38
Accounts payable.....	2,069.50	13.85	1,000.00	1,142.97	19,770.36
Bank overdraft.....					
Other liabilities.....					2,398.30
Total liabilities.....	8,241.30	5,081.44	5,814.59	50,706.94	103,133.04
RESERVES					
For depreciation.....	135.00	1,736.00	734.70	32,882.87	68,776.89
For equity in H.E.P.C. systems..	161.65	1,309.39	490.06	17,404.63	50,549.12
Total reserves.....	296.65	3,045.39	1,224.76	50,287.50	119,326.01
SURPLUS					
Debentures paid.....	169.65	932.41	1,185.41	39,683.05	62,120.05
Local sinking fund.....				5,959.71	
Additional operating surplus.....	348.63	7,339.45	4,089.89	10,007.29	186,981.45
Total surplus.....	518.28	8,271.86	5,275.30	55,650.05	249,101.50
Total liabilities, reserves & surplus	9,056.23	16,398.69	12,314.65	156,644.49	471,560.55
Percentage of net debt to total assets	92.6	33.6	50.0	36.4	24.4



## "A"—Continued

## Hydro Municipalities as at December 31, 1923

Sarnia 14,905	Scarboro Twp.	Seaforth 1,950	Simcoe 3,951	Springfield 432	Stamford Twp.	*Stouff- ville	Stratford 17,611
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
75,247.75		1,251.57	1,996.22		5,790.86		107,668.03
94,031.72		6,009.16	5,640.37		14,713.82		81,206.11
136,558.59	135,058.53	25,870.18	23,796.09	4,406.17	45,964.12	7,170.67	132,462.42
71,370.26	22,242.28	6,789.35	11,595.90	671.74	15,136.77	1,904.44	59,843.03
56,047.21	33,366.28	7,479.65	8,392.42	1,044.92	12,037.14	1,488.50	68,374.34
4,869.85	7,203.59	1,057.31	1,813.41	269.42	4,366.82	740.20	4,223.95
7,482.11			2,527.16				14,133.77
19,834.87	Cr. 2,092.57	364.48	3,880.65	685.08	6,803.39	246.41	15,638.59
56,248.50			927.92		13,743.66	4,740.27	16,150.00
521,690.86	195,778.11	48,821.70	60,570.14	7,077.33	118,556.58	16,290.49	499,700.24
10,255.11	5,567.48	56.03		1,147.97	1,941.48	506.82	
		7,000.00	6,000.00				3,000.00
30,367.83	9,607.79	4,397.38	2,628.72		1,802.55		73,629.42
9,305.34		2,789.47			7,752.05		15,643.43
		6,697.69					64,365.61
34,070.92	3,180.48	13,603.61	3,344.04	194.74	3,784.42	11.78	53,346.10
					350.00		
605,690.06	214,133.86	83,365.88	72,542.90	8,420.04	134,187.08	16,809.09	709,684.80
605,690.06	214,133.86	83,365.88	72,542.90	8,420.04	134,187.08	16,809.09	709,684.80
248,408.61	108,167.54	25,000.00	33,784.12	1,763.29	95,298.26	15,740.27	362,000.00
37,005.66	51,098.92			408.36	1,195.66	827.14	53,055.01
	1,916.64		3,391.73				17,692.40
9,871.67	7,749.35	3.00	3,500.00		425.00		
295,285.94	168,932.45	25,003.00	40,675.85	2,171.65	96,918.92	16,567.41	432,747.41
66,169.99	10,674.90	15,496.35	10,409.57		10,242.49		94,060.40
34,070.92	3,180.48	13,603.61	3,344.04	194.74	3,784.42	11.78	53,346.10
100,240.91	13,855.38	29,099.96	13,753.61	194.74	14,026.91	11.78	147,406.50
49,591.39	7,400.73		1,650.78	3,236.71	7,701.74		43,800.00
160,571.82	23,945.30	6,697.69	16,462.66	2,816.94	15,539.51	229.90	64,365.61
		22,565.23					21,365.28
210,163.21	31,346.03	29,262.92	18,113.44	6,053.65	23,241.25	229.90	129,530.89
605,690.06	214,133.86	83,365.88	72,542.90	8,420.04	134,187.08	16,809.09	709,684.80
51.6	80.0	35.8	58.7	26.3	74.3	98.6	65.9

## STATEMENT

## Balance Sheets of Electrical Departments of

NIAGARA  
SYSTEM—Continued

Municipality Population	Strathroy 2,627	Sutton	Tavistock 1,003	Tecumseh 1,019	Thames- ford, P. V.
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
<b>ASSETS</b>					
Lands and buildings.....	1,070.00		234.02		
Substation equipment.....	14,311.48				
Distribution system, overhead....	27,190.51	13,701.33	9,010.16	18,983.82	5,384.83
Distribution system, underground					
Line transformers.....	13,969.06	1,972.72	2,471.92	3,756.66	2,099.67
Meters.....	10,663.56	1,671.80	3,651.85	4,834.68	1,457.42
Street light equipment, regular	1,566.10	1,093.39	711.93		176.85
Street light equip., ornamental....					
Misc. construction expense.....	850.44	975.49	628.49	1,262.48	214.02
Steam or hydraulic plant.....					
Old plant.....	12,343.15	675.00			
Total plant.....	81,964.30	20,089.73	16,708.37	28,837.64	9,332.79
Bank and cash balance.....	1,502.37	351.19			1,748.39
Securities and investments.....			10,456.41		2,000.00
Accounts receivable.....	2,000.13	504.93		1,609.65	548.19
Inventories.....	13,361.34		275.79		
Sinking fund on local debentures					
Equity in Hydro systems.....	8,553.89	13.92	3,021.91	492.27	2,129.79
Other assets.....					
Total assets.....	107,382.03	20,959.77	30,462.48	30,939.56	15,759.16
Deficit.....		197.73		865.23	
Total.....	107,382.03	21,157.50	30,462.48	31,804.79	15,759.16
<b>LIABILITIES</b>					
Debenture balance.....	33,203.45		5,264.69	24,850.97	3,920.89
Accounts payable.....	1,907.66	1,143.58	2,485.55	4,121.90	16.28
Bank overdraft.....		20,000.00	120.90		
Other liabilities.....					
Total liabilities.....	35,111.11	21,143.58	7,871.14	28,972.87	3,937.17
<b>RESERVES</b>					
For depreciation.....	14,388.44		2,264.95	1,190.62	2,699.69
For equity in H.E.P.C. systems..	8,553.89	13.92	3,021.91	492.27	2,129.79
Total reserves.....	22,942.33	13.92	5,286.86	1,682.89	4,829.48
<b>SURPLUS</b>					
Debentures paid.....	13,028.55		735.31	1,149.03	1,437.14
Local sinking fund.....					
Additional operating surplus.....	36,300.04		16,569.17		5,555.37
Total surplus.....	49,328.59		17,304.48	1,149.03	6,992.51
Total liabilities, reserves & surplus	107,382.03	21,157.50	30,462.48	31,804.79	15,759.16
Percentage of net debt to total assets	35.5	100.9	28.6	95.1	28.9

## "A"—Continued

## Hydro Municipalities as at December 31, 1923

Thames- ville 817	Thedford 583	Thorn- dale P.V.	Thorold 5,243	Tilbury 1,851	Tillson- burg 3,027	Toronto 522,942	Toronto Twp.
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
.....	.....	.....	.....	957.46	2,224.27	1,886,645.31	.....
6,092.72	7,265.24	2,428.22	22,054.95	7,610.28	13,947.52	3,260,779.96	.....
.....	.....	.....	.....	.....	31,036.77	5,035,030.12	103,471.82
2,597.20	1,328.45	1,365.40	8,295.88	5,891.49	.....	1,229,520.85	.....
2,723.45	1,619.83	1,083.36	13,694.80	4,102.31	8,371.51	1,399,138.70	19,810.09
342.92	843.20	86.49	1,730.68	394.23	9,501.18	1,554,914.27	13,078.09
.....	.....	.....	.....	.....	2,780.82	354,971.61	75.33
576.75	1,530.81	310.45	4,152.75	1,179.48	242.81	.....	.....
.....	.....	.....	17,350.95	.....	933.23	2,612,636.03	895.34
4,232.38	433.78	.....	.....	3,049.47	.....	7,066,015.32	619.65
16,565.42	13,021.31	5,273.92	67,280.01	23,184.72	69,038.11	24,399,652.17	137,959.32
2,220.63	253.49	835.85	1,210.51	1,416.67	765.21	615,122.44	1,693.83
5,000.00	3,000.00	.....	.....	4,000.00	13,000.00	500,000.00	7,000.00
1,114.53	1,656.32	.....	5,294.65	2,504.15	4,346.44	1,203,600.51	3,826.11
.....	.....	29.07	.....	.....	1,738.61	1,123,053.14	.....
1,547.83	131.14	2,167.59	1,822.37	2,892.85	5,246.89	2,288,610.42	.....
.....	.....	.....	.....	.....	13,126.97	1,062,199.60	3,625.33
26,448.41	18,062.26	8,306.43	75,607.54	33,998.39	107,262.23	31,192,238.28	154,104.59
26,448.41	18,062.26	8,306.43	75,607.54	33,998.39	107,262.23	31,192,238.28	154,104.59
8,761.38	15,575.99	2,327.41	4,620.66	11,553.50	26,774.43	19,389,014.11	72,019.26
12.96	7.29	1,589.01	1,192.97	889.87	288.94	1,525,115.73	5,870.36
.....	.....	.....	939.50	.....	.....	150,024.66	.....
.....	.....	.....	.....	.....	506.00	794,882.17	500.01
8,774.34	15,583.28	3,916.42	6,753.13	12,443.37	27,569.37	21,859,036.67	78,389.63
3,044.19	221.00	1,194.66	19,642.77	3,710.26	20,431.46	3,539,207.57	27,740.48
1,547.83	131.14	2,167.59	1,822.37	2,892.85	13,126.97	1,062,199.60	3,625.33
4,592.02	352.14	3,362.25	21,465.14	6,603.11	33,558.43	4,601,407.17	31,365.81
2,426.42	924.01	759.07	379.34	2,446.50	9,225.57	653,985.89	6,980.74
10,655.63	1,202.83	268.69	47,009.93	12,505.41	5,246.89	2,288,610.42	.....
.....	.....	.....	.....	.....	31,661.97	1,789,198.13	37,368.41
13,082.05	2,126.84	1,027.76	47,389.27	14,951.91	46,134.43	4,731,794.44	44,349.15
26,448.41	18,062.26	8,306.43	75,607.54	33,998.39	107,262.23	31,192,238.28	154,104.59
35.6	86.9	63.7	9.1	40.0	29.2	72.5	52.1



## STATEMENT

## Balance Sheets of Electrical Departments of

NIAGARA  
SYSTEM—Continued

Municipality Population	Townsend Twp.	Vaughan Twp.	Walker- ville 7,303	Wallace- burg 3,921	Wards- ville 212
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
<b>ASSETS</b>					
Lands and buildings.....			123,447.08	1,735.58	
Substation equipment.....			72,840.43	2,333.21	
Distribution system, overhead....	853.71	3,669.68	63,330.56	32,545.77	4,418.43
Distribution system, underground					
Line transformers.....	1,317.08	3,370.44	45,030.81	17,946.95	601.14
Meters.....	269.74	2,540.63	40,906.55	13,963.87	585.75
Street light equipment, regular....		122.54		2,089.26	497.73
Street light equip., ornamental....			51,000.00		
Misc. construction expense.....	85.55	517.44	37,417.84	6,230.90	488.73
Steam or hydraulic plant.....					
Old plant.....			18,335.05	19,485.49	193.94
Total plant.....	2,526.08	10,220.73	452,308.32	96,331.03	6,785.72
Bank and cash balance.....		377.33	50.00	28,001.64	1,788.91
Securities and investments.....					
Accounts receivable.....	73.92	1,824.14	111,981.61	20,317.22	84.58
Inventories.....			31,811.44	6,370.95	
Sinking fund on local debentures.					
Equity in Hydro systems.....	450.42	2,467.99	76,521.37	12,227.46	64.28
Other assets.....			1,855.24		
Total assets.....	3,050.42	14,890.19	674,527.98	163,248.30	8,723.49
Deficit.....		1,805.79			
Total.....	3,050.42	16,695.98	674,527.98	163,248.30	8,723.49
<b>LIABILITIES</b>					
Debenture balance.....	2,201.57	6,826.82	259,364.71	63,328.75	7,114.39
Accounts payable.....		2,824.37	25,907.74	6,533.35	1.22
Bank overdraft.....			35,433.01		
Other liabilities.....			65,715.70	127.00	
Total liabilities.....	2,201.57	9,651.19	386,421.16	69,989.10	7,115.61
<b>RESERVES</b>					
For depreciation.....		3,403.62	56,119.52	15,979.15	246.00
For equity in H.E.P.C. systems....	450.42	2,467.99	76,521.37	12,227.46	64.28
Total reserves.....	450.42	5,871.61	132,640.89	28,206.61	310.28
<b>SURPLUS</b>					
Debentures paid.....	398.43	1,173.18	39,894.29	8,207.83	448.01
Local sinking fund.....					
Additional operating surplus.....			115,571.64	56,844.76	849.59
Total surplus.....	398.43	1,173.18	155,465.93	65,052.59	1,297.60
Total liabilities, reserves & surplus	3,050.42	16,695.98	674,527.98	163,248.30	8,723.49
Percentage of net debt to total assets	84.6	77.7	64.6	46.3	82.1

## "A"—Continued

## Hydro Municipalities as at December 31, 1923

Waterdown 815	Waterford 1,112	Waterloo 5,976	Waterloo Twp.	Watford 1,039	Welland 8,880	Wellesley P. V.	West Lorne 803
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
200.00		13,773.78			28,056.84		
11,052.63	8,866.24	49,881.03	334.38	9,702.51	49,403.70	5,186.70	6,535.88
		54,183.62			111,745.09		
2,004.04	3,982.30	21,714.74	1,015.13	3,196.65	33,425.15	1,704.76	2,737.62
3,362.83	3,785.23	21,655.77	355.49	3,503.61	30,427.80	1,595.70	2,065.16
341.67	1,721.08	6,245.39		597.42	4,610.66	425.70	567.97
100.34	442.53	6,012.21	33.88	1,305.70	12,210.98	128.57	234.43
		2,333.64					
	607.69	24,527.03		657.44			1,250.00
17,061.51	19,405.07	200,327.21	1,738.88	18,963.33	269,880.22	9,041.43	13,391.06
17.27	1,824.61			2,678.14	100.00	2,861.18	3,921.12
5,500.00	3,000.00						6,000.00
1,237.49	650.60	12,907.95		1,951.77	73,212.00	68.74	435.79
39.00	16.10	4,237.74			3,070.64		48.24
		4,032.00			39,720.05		
3,130.77	2,228.44	22,395.63	681.23	656.18	14,284.73	1,896.91	1,568.96
26,986.04	27,124.82	243,900.53	2,420.11	24,249.42	400,267.64	13,868.26	25,365.17
					25,845.22		
26,986.04	27,124.82	243,900.53	2,420.11	24,249.42	426,112.86	13,868.26	25,365.17
4,079.24		89,223.12		7,211.91	197,959.99	5,788.65	7,150.62
421.88	73.92	829.29	1,738.88		86,864.56		1,467.84
		9,665.31			2,414.59		
					19,905.62		
4,501.12	73.92	99,717.72	1,738.88	7,211.91	307,144.76	5,788.65	8,618.46
9,563.78	3,751.40	50,075.41		2,292.67	62,923.31	1,980.00	2,060.00
3,130.77	2,228.44	22,395.63	681.23	656.18	14,284.73	1,896.91	1,568.96
12,694.55	5,979.84	72,471.04	681.23	2,948.85	77,208.04	3,876.91	3,628.96
3,920.76	7,745.53	16,776.88		2,501.30	2,040.01	1,711.35	849.38
		4,032.00			39,720.05		
5,869.61	13,325.53	50,902.89		11,587.36		2,491.35	12,268.37
9,790.37	21,071.06	71,711.77		14,088.66	41,760.06	4,202.70	13,117.75
26,986.04	27,124.82	243,900.53	2,420.11	24,249.42	426,112.86	13,868.26	25,365.17
18.8	0.2	45.0	100.0	30.5	79.5	48.3	36.2

# STATEMENT

## Balance Sheets of Electrical Departments of

### NIAGARA SYSTEM—Continued

Municipality Population	Weston 3,299	Windsor 38,530	Wood- bridge 679	Wood- stock 10,164	Wyoming 489
<b>ASSETS</b>	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Lands and buildings.....	3,514.15	160,825.62	.....	28,776.51	.....
Substation equipment.....	24,706.32	227,731.86	.....	59,727.65	.....
Distribution system, overhead....	29,974.07	402,379.10	8,932.68	77,539.09	6,609.44
Distribution system, underground	.....	.....	.....	.....	.....
Line transformers.....	17,932.19	202,173.41	2,958.71	37,914.91	1,012.00
Meters.....	12,757.58	194,051.68	2,667.58	38,575.51	1,487.96
Street light equipment, regular...	5,035.77	23,603.16	397.62	10,699.09	275.52
Street light equip., ornamental...	13,508.43	286,984.35	.....	.....	.....
Misc. construction expense.....	4,549.02	88,434.50	642.82	17,626.55	805.20
Steam or hydraulic plant.....	.....	.....	.....	.....	.....
Old plant.....	.....	116,786.47	.....	14,908.62	.....
Total plant.....	111,977.53	1,702,970.15	15,599.41	285,767.93	10,190.12
Bank and cash balance.....	1,844.08	275.00	1,167.05	447.65	952.08
Securities and investments.....	.....	.....	4,993.58	.....	.....
Accounts receivable.....	10,501.03	270,528.42	1,726.97	8,239.01	1,000.00
Inventories.....	546.46	107,559.03	49.20	2,543.63	.....
Sinking fund on local debentures.	.....	46,408.86	.....	24,995.73	.....
Equity in Hydro systems.....	20,923.73	92,005.89	2,961.57	30,021.65	857.09
Other assets.....	.....	.....	.....	.....	.....
Total assets.....	145,792.83	2,219,747.35	26,497.78	352,015.60	12,999.29
Deficit.....	.....	.....	.....	.....	797.70
Total.....	145,792.83	2,219,747.35	26,497.78	352,015.60	13,796.99
<b>LIABILITIES</b>	.....	.....	.....	.....	.....
Debenture balance.....	36,765.47	1,055,834.52	7,359.21	87,385.63	7,478.33
Accounts payable.....	10,602.42	236,227.86	999.92	1,187.25	1,483.90
Bank overdraft.....	.....	448.02	.....	.....	.....
Other liabilities.....	.....	302,467.20	.....	750.00	.....
Total liabilities.....	47,367.89	1,594,977.60	8,359.13	89,322.88	8,962.23
<b>RESERVES</b>	.....	.....	.....	.....	.....
For depreciation.....	25,497.31	116,209.30	3,679.17	57,646.65	1,756.00
For equity in H.E.P.C. systems..	20,923.73	92,005.89	2,961.57	30,021.65	857.09
Total reserves.....	46,421.04	208,215.19	6,640.74	87,668.30	2,613.09
<b>SURPLUS</b>	.....	.....	.....	.....	.....
Debentures paid.....	8,202.41	84,165.51	1,140.76	40,000.00	2,221.67
Local sinking fund.....	.....	46,408.86	.....	24,995.73	.....
Additional operating surplus.....	43,801.49	285,980.19	10,357.15	110,028.69	.....
Total surplus.....	52,003.90	416,554.56	11,497.91	175,024.42	2,221.67
Total liabilities, reserves & surplus	145,792.83	2,219,747.35	26,497.78	352,015.60	13,796.99
Percentage of net debt to total assets	37.9	74.9	35.5	27.7	61.5



## "A"—Continued

## Hydro Municipalities as at December 31, 1923

			SEVERN SYSTEM			
York Twp.	Zurich P. V.	NIAGARA SYSTEM SUMMARY	Alliston 1,321	Barrie 6,888	Beeton 586	Bradford 1,028
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
		3,958,652.28		12,403.21		
		5,535,391.76	675.73	4,682.98	428.50	388.50
447,740.48	3,949.55	10,895,508.36	20,819.12	38,961.41	10,472.45	14,596.29
		1,665,243.02				
	991.96	3,559,779.72	4,894.37	12,819.54	1,731.74	1,362.34
	1,400.35	3,785,448.77	4,979.49	28,426.68	1,189.73	2,124.42
23,334.05	395.77	848,123.43	1,354.92	5,321.09	913.98	544.95
		628,668.05				
6,706.84	250.77	3,377,285.69	2,537.92	413.68	1,432.19	1,691.36
		35,834.59				
	150.00	7,734,869.46	8,146.49	41,587.61		
477,781.37	7,138.40	42,024,805.13	43,408.04	144,616.20	16,168.59	20,707.86
	266.35	936,593.67	3,957.65	1,246.78	34.27	1,437.89
	5,500.00	811,628.38		56,114.97		
1,627.35	434.03	2,806,565.91	1,879.35	11,925.31	770.35	841.24
		1,689,048.51		3,500.01	13.67	52.81
		3,219,783.04				
	588.62	2,738,027.76		10,728.54		
556.28		187,033.52				
479,965.00	13,927.40	54,413,485.92	49,245.04	228,131.81	16,986.88	23,039.80
		42,025.01	490.89		2,388.87	6,875.62
479,965.00	13,927.40	54,455,510.93	49,735.93	228,131.81	19,375.75	29,915.42
188,799.99	5,131.30	29,216,488.99	36,583.49	26,311.39	13,752.47	18,073.83
264,906.48		3,386,134.68	4,026.93	3,200.20	2,168.34	7,703.10
952.55		625,564.24				
		1,478,804.33		700.00		
454,659.02	5,131.30	34,706,992.24	40,610.42	30,211.59	15,920.81	25,776.93
11,109.58	1,354.00	6,258,817.81	5,709.00	28,401.40	2,207.41	3,012.32
	588.62	2,738,027.76		10,728.54		
11,109.58	1,942.62	8,996,845.57	5,709.00	39,129.94	2,207.41	3,012.32
11,200.01	460.31	2,108,144.07	3,416.51	60,688.61	1,247.53	1,126.17
		3,219,783.04				
2,996.39	6,393.17	5,423,746.01		98,101.67		
14,196.40	6,853.48	10,751,673.12	3,416.51	158,790.28	1,247.53	1,126.17
479,965.00	13,927.40	54,455,510.93	49,735.93	228,131.81	19,375.75	29,915.42
94.7	38.4	67.1	82.4	13.8	93.7	111.9

**STATEMENT**

**Balance Sheets of Electrical Departments of**

**SEVERN  
SYSTEM—Continued**

Municipality Population	Coldwater 647	Collingwood 6,237	Cookstown P. V.	Creemore 540
<b>ASSETS</b>	\$ c.	\$ c.	\$ c.	\$ c.
Lands and buildings.....	275.00	12,880.52	60.00	
Substation equipment.....		11,212.59	392.95	
Distribution system, overhead....	6,570.34	39,450.46	8,547.10	5,333.96
Distribution system, underground.....				
Line transformers.....	2,715.07	11,358.58	1,811.45	1,318.57
Meters.....	1,933.64	18,860.82	1,218.07	1,915.15
Street light equipment, regular.....	372.82	2,688.59	514.21	272.07
Street light equip., ornamental.....				
Misc. construction expense.....	132.53	7,838.56	1,499.15	185.41
Steam or hydraulic plant.....				
Old plant.....		517.75		2,651.15
Total plant.....	11,999.40	104,807.87	14,042.93	11,676.31
Bank and cash balance.....	3,947.65	8,745.37	1,125.25	2,979.12
Securities and investments.....		13,000.00	1,000.00	5,000.00
Accounts receivable.....	3,013.25	28,181.11	450.37	1,110.54
Inventories.....		872.91		
Sinking fund on local debentures.....				
Equity in Hydro systems.....	1,398.40	26,808.20		1,664.74
Other assets.....				
Total assets.....	20,358.70	182,415.46	16,618.55	22,430.71
Deficit.....				
Total.....	20,358.70	182,415.46	16,618.55	22,430.71
<b>LIABILITIES</b>				
Debenture balance.....	5,755.70	17,519.71	12,418.50	4,469.58
Accounts payable.....		4,277.67	628.11	39.00
Bank overdraft.....				
Other liabilities.....	400.00	1,077.27		
Total liabilities.....	6,155.70	22,874.65	13,046.61	4,508.58
<b>RESERVES</b>				
For depreciation.....	4,171.12	29,677.43	2,078.00	2,410.26
For equity in H.E.P.C. systems..	1,398.40	26,808.20		1,664.74
Total reserves.....	5,569.52	56,485.63	2,078.00	4,075.00
<b>SURPLUS</b>				
Debentures paid.....	1,244.30	21,890.58	1,081.50	2,030.42
Local sinking fund.....				
Additional operating surplus.....	7,389.18	81,164.60	412.44	11,816.71
Total surplus.....	8,633.48	103,055.18	1,493.94	13,847.13
Total liabilities, reserves & surplus.....	20,358.70	182,415.46	16,618.55	22,430.71
Percentage of net debt to total assets	32.4	14.6	78.5	21.7

## "A"—Continued

## Hydro Municipalities as at December 31, 1923

Elmvale P. V.	Midland 7,022	Penetang- uishene 3,920	Port McNicol 576	Stayner 1,004	Thornton P. V.
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
106.25	10,864.80	2,151.00	202.60		
	20,644.94	3,507.71		200.00	
6,823.38	73,439.00	35,455.52	6,149.46	9,099.84	5,923.77
2,322.34	15,136.85	13,455.02	562.39	2,940.85	606.88
2,238.67	23,871.85	10,892.00	1,319.65	3,088.51	369.01
333.78	5,247.42	2,345.77	166.73	790.02	375.90
455.93	7,217.43	1,664.52	496.42	310.33	300.35
	14,515.62	2,374.20		4,132.41	
12,280.35	170,937.91	71,845.74	8,897.25	20,561.96	7,575.91
5,750.66	14,045.40	15,694.17	690.38	2,799.56	323.92
	9,900.04			4,000.00	
1,395.21	26,748.36	7,968.72	320.85	984.34	
192.07	3,454.82	579.56	11.96	88.81	
2,253.38	19,921.97	16,120.27	523.31	2,327.05	
21,871.67	245,008.50	112,208.46	10,443.75	30,761.72	7,899.83
					3,144.19
21,871.67	245,008.50	112,208.46	10,443.75	30,761.72	11,044.02
5,503.16	77,769.28	31,403.40	5,832.38	9,634.67	6,705.34
	222.98		283.08		2,286.02
5,503.16	77,992.26	31,403.40	6,115.46	9,634.67	8,991.36
4,031.00	38,675.31	21,746.48	1,650.00	4,300.28	1,258.00
2,253.38	19,921.97	16,120.27	523.31	2,327.05	
6,284.38	58,597.28	37,866.75	2,173.31	6,627.33	1,258.00
1,496.84	34,300.71	9,596.60	1,467.62	4,365.33	794.66
8,587.29	74,118.25	33,341.71	687.36	10,134.39	
10,084.13	108,418.96	42,938.31	2,154.98	14,499.72	794.66
21,871.67	245,008.50	112,208.46	10,443.75	30,761.72	11,044.02
28.0	34.6	32.7	61.6	33.9	113.8



**STATEMENT**

**Balance Sheets of Electrical Departments of**

**SEVERN  
SYSTEM—Continued**

Municipality Population	Tottenham 512	Victoria Harbour 1,485	Waubashene P. V.	SEVERN SYSTEM SUMMARY
	\$ c.	\$ c.	\$ c.	\$ c.
<b>ASSETS</b>				
Lands and buildings.....				38,943.38
Substation equipment.....	358.50			42,492.40
Distribution system, overhead....	7,707.79	5,094.22	3,444.15	297,888.26
Distribution system, underground				
Line transformers.....	1,117.48	825.92	490.42	75,469.81
Meters.....	1,533.67	2,030.65	968.72	106,960.73
Street light equipment, regular...	460.17	216.97	164.14	22,083.53
Street light equip., ornamental....				
Misc. construction expense.....	1,287.37	642.64	257.66	28,363.45
Steam or hydraulic plant.....				
Old plant.....	361.45			74,286.68
Total plant.....	12,826.43	8,810.40	5,325.09	686,488.24
Bank and cash balance.....	1,050.08	4,162.35	2,541.49	70,531.99
Securities and investments.....				89,015.01
Accounts receivable.....	162.81	469.38	130.23	86,351.42
Inventories.....				8,766.62
Sinking fund on local debentures.				
Equity in Hydro systems.....		786.99	405.72	82,938.57
Other assets.....				
Total assets.....	14,039.32	14,229.12	8,402.53	1,024,091.85
Deficit.....	3,817.34			16,716.91
Total.....	17,856.66	14,229.12	8,402.53	1,040,808.76
<b>LIABILITIES</b>				
Debenture balance.....	8,085.59	4,687.79	2,558.29	287,064.57
Accounts payable.....	5,937.74		226.66	30,999.83
Bank overdraft.....				
Other liabilities.....				2,177.27
Total liabilities.....	14,023.33	4,687.79	2,784.95	320,241.67
<b>RESERVES</b>				
For depreciation.....	1,451.82	2,022.37	1,023.51	153,825.71
For equity in H.E.P.C. systems..		786.99	405.72	82,938.57
Total reserves.....	1,451.82	2,809.36	1,429.23	236,764.28
<b>SURPLUS</b>				
Debentures paid.....	2,381.51	1,812.21	941.71	149,882.81
Local sinking fund.....				
Additional operating surplus.....		4,919.76	3,246.64	333,920.00
Total surplus.....	2,381.51	6,731.97	4,188.35	483,802.81
Total liabilities, reserves & surplus	17,856.66	14,229.12	8,402.53	1,040,808.76
Percentage of net debt to total assets	99.9	34.9	36.1	34.0

## "A"—Continued

## Hydro Municipalities as at December 31, 1923

EUGENIA  
SYSTEM

Arthur 1,222	Chats- worth 287	Chesley 1,803	Derby Twp.	Dundalk 725	Durham 1,622	Elmwood P. V.	Flesherton 410
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
	65.00						
15,706.53	3,784.44	595.98 17,465.49	90.41	6,092.01	584.88 16,200.56	4,662.77	4,615.55
3,799.78	667.69	4,117.38	73.32	1,404.81	5,483.08	803.88	324.62
2,596.02	832.42	4,800.88	32.05	1,474.19	3,497.07	624.18	911.55
624.60	288.30	1,017.36		648.09	921.12	302.28	384.61
245.82	385.90	3,309.66	14.68	228.69	915.61	1,093.62	869.12
1,101.47		5,503.60		380.94	1,506.51		
24,074.22	6,023.75	36,810.35	210.46	10,228.73	29,108.83	7,486.73	7,105.45
244.04	758.25	64.38		13.02	10,918.53	530.08	1,129.46
128.36	566.60	2,956.58		3,000.00 803.20	2,276.19	228.63	338.20
	1,238.60	140.00					20.00
3,139.97	661.81	3,661.62		1,651.47	4,409.89	174.72	920.65
27,586.59	9,249.01	43,632.93	210.46	15,696.42	46,713.44	8,420.16	9,513.76
14,534.18						415.05	699.11
42,120.77	9,249.01	43,632.93	210.46	15,696.42	46,713.44	8,835.21	10,212.87
19,075.44	5,233.46	20,317.11		3,607.66	19,942.27	5,948.84	5,802.30
12,826.15	383.00		210.46	120.00	735.33	502.52	927.70
31,901.59	5,616.46	20,317.11	210.46	3,727.66	20,677.60	6,451.36	6,730.00
5,154.65	1,244.57	6,140.40		2,208.22	4,712.71	957.97	1,664.52
3,139.97	661.81	3,661.62		1,651.47	4,409.89		920.65
8,294.62	1,906.38	9,802.02		3,859.69	9,122.60	957.97	2,585.17
1,924.56	166.54	7,182.89		2,729.24	5,857.73	1,251.16	897.70
	1,238.60					174.72	
	321.03	6,330.91		5,379.83	11,055.51		
1,924.56	1,726.17	13,513.80		8,109.07	16,913.24	1,425.88	897.70
42,120.77	9,249.01	43,632.93	210.46	15,696.42	46,713.44	8,835.21	10,212.87
130.4	65.4	50.8	100.0	26.5	48.8	76.6	78.3

## STATEMENT

## Balance Sheets of Electrical Departments of

EUGENIA  
SYSTEM—Continued

Municipality Population	Grand Valley 583	Hanover 2,695	Holstein P. V.	Kincard- ine 2,159	Lucknow 887
<b>ASSETS</b>	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Lands and buildings.....	36.50	64.80		4,531.41	
Substation equipment.....		9,271.19		2,794.20	
Distribution system, overhead....	8,944.18	45,102.52	2,010.87	34,668.94	14,208.54
Distribution system, underground					
Line transformers.....	711.05	13,720.33	455.22	6,241.21	2,084.04
Meters.....	1,647.15	11,867.78	341.87	6,080.72	2,460.50
Street light equipment, regular...	458.21	2,291.18	168.69	3,807.43	1,040.95
Street light equip., ornamental....					
Misc. construction expense.....	205.70	6,424.37	170.25	5,650.68	2,099.08
Steam or hydraulic plant.....					
Old plant.....	919.85	2,370.91			
Total plant.....	12,922.64	91,113.08	3,146.90	63,774.59	21,893.11
Bank and cash balance.....	856.58	21,730.93	378.55	470.42	1,479.90
Securities and investments.....	4,500.00				
Accounts receivable.....	67.37	4,456.28	476.38	1,170.68	49.35
Inventories.....	63.65	150.00		1,328.50	40.00
Sinking fund on local debentures.				3,622.36	
Equity in Hydro systems.....	1,286.99	12,332.67	446.33		
Other assets.....		465.67			
Total assets.....	19,697.23	130,248.63	4,448.16	70,366.55	23,462.36
Deficit.....			4,218.34	9,512.13	
Total.....	19,697.23	130,248.63	8,666.50	79,878.68	23,462.36
<b>LIABILITIES</b>					
Debenture balance.....	8,489.99	75,120.32	1,925.64	60,164.64	18,388.80
Accounts payable.....	1,091.19	6,757.23	4,963.71	10,085.51	1,095.37
Bank overdraft.....					
Other liabilities.....					
Total liabilities.....	9,581.18	81,877.55	6,889.35	70,250.15	19,484.17
<b>RESERVES</b>					
For depreciation.....	2,564.77	12,656.35	494.41	1,970.81	768.00
For equity in H.E.P.C. systems..	1,286.99	12,332.67	446.33		
Total reserves.....	3,851.76	24,989.02	940.74	1,970.81	768.00
<b>SURPLUS</b>					
Debentures paid.....	2,510.01	12,379.68	836.41	4,035.36	1,334.56
Local sinking fund.....				3,622.36	
Additional operating surplus.....	3,754.28	11,002.38			1,875.63
Total surplus.....	6,264.29	23,382.06	836.41	7,657.72	3,210.19
Total liabilities, reserves & surplus	19,697.23	130,248.63	8,666.50	79,878.68	23,462.36
Percentage of net debt to total assets	52.0	69.4	154.9	99.8	83.0

\*Not final.



“A”—Continued

Hydro Municipalities as at December 31, 1923

Markdale 908	Mount Forest 1,761	Neustadt 445	Orange- ville 2,503	Owen Sound 12,360	Paisley 749	*Priceville P. V.	Ripley P. V.
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
780.80	3,725.00		2,517.00	28,953.74		68.00	
7,503.93	686.75		1,169.00	8,524.45			
	17,975.80	9,663.12	22,134.66	75,210.93	9,522.31	4,625.00	8,718.48
2,108.87	3,628.71	4,282.03	3,209.08	29,075.26	1,155.68	549.70	2,592.36
1,961.20	4,074.50	1,516.42	5,452.49	39,175.64	1,747.65	301.10	568.09
530.79	1,833.74	496.41	1,149.67	10,382.33	1,013.81	139.88	850.83
				500.00			
549.06	1,796.02	1,495.88	3,331.69	2,303.96	464.03	833.90	1,164.99
2,080.65	3,958.97	1,097.60	3,204.99	33,282.00			
					1,816.30		
15,515.30	37,679.49	18,551.46	42,168.58	227,408.31	15,719.78	6,517.58	13,894.75
998.00	3,455.60	34.63	1,160.72			108.20	554.33
	3,887.83						
683.72	788.90	1,512.33	551.29	10,893.69	943.56	332.25	21.24
505.47	310.84		377.00	11,523.26			
				80,216.61			
898.18	4,324.67		3,224.22	23,264.82			
				1,021.10			
18,600.67	50,447.33	20,098.42	47,481.81	354,327.79	16,663.34	6,958.03	14,470.32
		4,287.13	4,950.83			1,105.06	1,026.27
18,600.67	50,447.33	24,385.55	52,432.64	354,327.79	16,663.34	8,063.09	15,496.59
7,873.61	21,461.96	14,642.56	27,331.74	105,000.00	15,978.53	6,382.80	13,367.90
	6,135.67	5,146.55	5,536.22	11,482.62		818.09	1,054.65
				274.68	517.67		
				987.95	30.00		
7,873.61	27,597.63	19,789.11	32,867.96	117,745.25	16,526.20	7,200.89	14,422.55
3,116.05	6,730.51	2,239.00	7,772.20	36,017.44		245.00	470.00
898.18	4,324.67		3,224.22	23,264.82			
4,014.23	11,055.18	2,239.00	10,996.42	59,282.26		245.00	470.00
1,126.39	9,496.64	2,357.44	8,568.26	36,000.00		617.20	604.04
5,586.44	2,297.88			80,216.61			
				61,083.67	137.14		
6,712.83	11,794.52	2,357.44	8,568.26	177,300.28	137.14	617.20	604.04
18,600.67	50,447.33	24,385.55	52,432.64	354,327.79	16,663.34	8,063.09	15,496.59
44.4	59.8	98.4	74.2	33.1	99.1	103.5	99.7

## STATEMENT

## Balance Sheets of Electrical Departments of

EUGENIA  
SYSTEM—Continued

Municipality Population	Shel- burne 1,101	Tara 521	Tees- water 838	Wingham 2,470	EUGENIA SYSTEM SUMMARY
ASSETS	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Lands and buildings.....	800.00			8,508.05	49,269.50
Substation equipment.....	566.60		330.31	4,657.93	29,962.09
Distribution system, overhead....	12,993.21	10,261.78	14,059.55	29,767.84	395,989.42
Distribution system, underground					
Line transformers.....	3,251.98	1,706.89	2,771.05	11,847.68	106,065.70
Meters.....	3,599.09	1,221.88	1,895.39	7,952.06	106,631.89
Street light equipment, regular	971.65	430.59	1,297.97	3,064.87	34,115.36
Street light equip., ornamental....					500.00
Misc. construction expense.....	2,189.46	1,871.56	1,727.00	3,600.49	42,941.22
Steam or hydraulic plant.....				13,200.00	46,482.00
Old plant.....	739.50		5,000.36	15,288.58	44,970.23
Total plant.....	25,111.49	15,492.70	27,081.63	97,887.50	856,927.41
Bank and cash balance.....	396.57	825.03	3.18	814.76	46,925.16
Securities and investments.....				5,000.00	16,387.83
Accounts receivable.....	1,939.97	304.58	256.15	4,200.44	35,945.94
Inventories.....		7.83	31.69	1,986.31	16,484.55
Sinking fund on local debentures			2,706.80		87,959.09
Equity in Hydro systems.....	2,167.70				62,390.99
Other assets.....					1,486.77
Total assets.....	29,615.73	16,630.14	30,079.45	109,889.01	1,124,507.74
Deficit.....		6,011.37	2,061.39		48,820.86
Total.....	29,615.73	22,641.51	32,140.84	109,889.01	1,173,328.60
LIABILITIES					
Debenture balance.....	14,979.34	12,994.96	26,829.89	69,218.40	580,078.16
Accounts payable.....	121.97	4,846.51	994.49	5,353.17	81,188.11
Bank overdraft.....					792.35
Other liabilities.....					1,017.95
Total liabilities.....	15,101.31	17,841.47	27,824.38	74,571.57	663,076.57
RESERVES					
For depreciation.....	4,509.55	2,295.00	439.55	5,711.20	110,082.88
For equity in H.E.P.C. systems ..	2,167.70				62,390.99
Total reserves.....	6,677.25	2,295.00	439.55	5,711.20	172,473.87
SURPLUS					
Debentures paid.....	4,940.66	2,505.04	1,170.11	26,887.10	135,378.72
Local sinking fund.....			2,706.80		87,959.09
Additional operating surplus.....	2,896.51			2,719.14	114,440.35
Total surplus.....	7,837.17	2,505.04	3,876.91	29,606.24	337,778.16
Total liabilities, reserves & surplus	29,615.73	22,641.51	32,140.84	109,889.01	1,173,328.60
Percentage of net debt to total assets	55.	107.2	86.6	67.8	62.4

## "A"—Continued

## Hydro Municipalities as of December 31, 1923

WASDELLS  
SYSTEM

Beaverton 986	Brechin P. V.	Brock Twp.	Cannington 951	Kirkfield P. V.	Port Perry 1,162	Sunderland P. V.	Uxbridge 1,492
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
250.00							
9,006.60	1,512.45	1,742.56	8,304.37	5,041.33	14,574.75	3,269.70	10,415.32
2,546.31	936.80	795.70	2,170.88	428.20	1,593.89	1,250.16	2,034.82
3,389.02	412.57		3,093.05	390.60	2,674.78	1,479.96	2,042.73
501.09	86.31		570.42	379.00	384.31	240.33	1,187.43
2,163.77	586.00	61.74	559.63	301.53	158.12	142.22	738.42
3,772.42			3,609.37			2,030.00	
21,629.21	3,534.13	2,600.00	18,307.72	6,540.66	19,385.85	8,412.37	16,418.72
5,844.04	699.96		406.24	65.98	1,678.95	1,768.06	
2,331.18	281.08		1,680.92	546.00	2,000.00		3,000.00
755.47			699.71	17.19	1,639.17	12.80	1,971.42
2,746.67	1,643.98		2,311.81			2,080.68	
33,306.57	6,159.15	2,600.00	23,406.40	7,169.83	24,703.97	12,273.91	21,390.14
	2,888.21			10.29		1,098.90	
33,306.57	9,047.36	2,600.00	23,406.40	7,180.12	24,703.97	13,372.81	21,390.14
12,506.85	2,938.71	2,276.18	12,778.45	5,480.75	20,000.00	5,525.73	16,207.59
200.00	3,342.38			666.12		2,966.01	38
							51.09
12,706.85	6,281.09	2,276.18	12,778.45	6,146.87	20,000.00	8,491.74	16,259.06
3,459.00	811.00		3,336.14	514.00	385.00	1,526.12	314.00
2,746.67	1,643.98		2,311.81			2,080.68	
6,205.67	2,454.98		5,647.95	514.00	385.00	3,606.80	314.00
2,493.15	311.29	323.82	2,221.55	519.25		1,274.27	
11,900.90			2,758.45		4,318.97		4,817.08
14,394.05	311.29	323.82	4,980.00	519.25	4,318.97	1,274.27	4,817.08
33,306.57	9,047.36	2,600.00	23,406.40	7,180.12	24,703.97	13,372.81	21,390.14
41.5	139.1	87.5	60.5	85.7	80.9	83.3	76.0



## STATEMENT

## Balance Sheets of Electrical Departments of

WASDELLS SYSTEM—Continued			MUSKOKA SYSTEM		
Municipality	Woodville	WASDELLS SYSTEM SUMMARY	Graven- hurst 1,621	Hunts- ville 2,316	MUSKOKA SYSTEM SUMMARY
Population	455				
<b>ASSETS</b>	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Lands and buildings.....		250.00	12,258.29	326.49	12,584.78
Substation equipment.....			12,365.17	647.30	13,012.47
Distribution system, overhead....	2,086.40	55,953.48	27,745.86	11,240.69	38,986.55
Distribution system, underground.....					
Line transformers.....	975.67	12,732.43	1,703.32	3,609.60	5,312.92
Meters.....	1,367.17	14,849.88	5,340.83	5,460.76	10,801.59
Street light equipment, regular....	127.31	3,476.20	695.45	1,036.50	1,731.95
Street light equip., ornamental....					
Misc. construction expense.....	251.91	4,963.34	1,762.00	699.92	2,461.92
Steam or hydraulic plant.....					
Old plant.....	2,182.50	11,594.29	7,610.69	5,436.20	13,046.89
Total plant.....	6,990.96	103,819.62	69,481.61	28,457.46	97,939.07
Bank and cash balance.....	1,377.28	11,840.51	1,648.17	9,635.76	11,283.93
Securities and investments.....		5,000.00			
Accounts receivable.....	878.85	9,341.42	4,362.72	225.94	4,588.66
Inventories.....		1,472.37	2,596.26	2,369.81	4,966.07
Sinking fund on local debentures.....			3,474.83		3,474.83
Equity in Hydro systems.....	2,189.11	10,972.25	2,322.78	6,349.28	8,672.06
Other assets.....					
Total assets.....	11,436.20	142,446.17	83,886.37	47,038.25	130,924.62
Deficit.....		3,997.40	2,132.21		2,132.21
Total.....	11,436.20	146,443.57	86,018.58	47,038.25	133,056.83
<b>LIABILITIES</b>					
Debenture balance.....	4,647.29	82,361.55	34,207.50	14,685.77	48,893.27
Accounts payable.....	986.39	8,161.28	4,131.68	1,527.65	5,659.33
Bank overdraft.....		51.09			
Other liabilities.....				23.58	23.58
Total liabilities.....	5,633.68	90,573.92	38,339.18	16,237.00	54,576.18
<b>RESERVES</b>					
For depreciation.....	981.90	11,327.16	12,120.85	4,955.61	17,076.46
For equity in H.E.P.C. systems..	2,189.11	10,972.25	2,322.78	6,349.28	8,672.06
Total reserves.....	3,171.01	22,299.41	14,443.63	11,304.89	25,748.52
<b>SURPLUS</b>					
Debentures paid.....	852.71	7,996.04	29,760.94	6,447.77	36,208.71
Local sinking fund.....			3,474.83		3,474.83
Additional operating surplus.....	1,778.80	25,574.20		13,048.59	13,048.59
Total surplus.....	2,631.51	33,570.24	33,235.77	19,496.36	52,732.13
Total liabilities, reserves & surplus	11,436.20	146,443.57	86,018.58	47,038.25	133,056.83
Percentage of net debt to total assets	49.2	68.8	47.	39.9	44.6

## "A"—Continued

## Hydro Municipalities as at December 31, 1923

ST. LAWRENCE  
SYSTEM

Alexandria 2,319	Apple Hill P. V.	Brockville 9,377	Chester- ville 941	Lancaster 612	Martin- town P. V.	Maxville 785
\$ c. 202.00	\$ c. 169.06	\$ c. 27,994.53	\$ c. 250.00	\$ c. 126.15	\$ c. 407.79	\$ c. 10,869.71
22,593.20	2,707.18	63,205.55	6,322.49	6,054.11	2,437.17	1,732.20
6,202.23	1,165.70	22,172.60	2,037.56	1,064.35	690.33	2,194.34
4,880.32	615.81	29,054.11	2,676.23	1,115.23	533.00	1,379.56
1,990.34	398.97	14,812.96	318.22	567.75	335.26	2,357.66
5,407.05	192.84	5,374.54	610.68	1,053.60	653.27	
4,466.89	709.55	56,212.22				
45,742.03	5,959.11	218,826.51	12,215.18	9,855.04	4,775.18	18,941.26
561.17	5.02	28,212.40	437.67	88.46	192.88	
2,690.89	909.83	31,052.44	2,651.24	359.86	1,000.00	319.64
157.30		2,893.79	1,384.41		20.08	
		66,319.58				
		15,183.41	4,954.84			
		377.22				
49,151.39	6,873.96	362,865.35	21,643.34	10,303.36	5,988.14	19,260.90
2,160.56	61.86			5,316.84	171.86	2,759.19
51,311.95	6,935.82	362,865.35	21,643.34	15,620.20	6,160.00	22,020.09
37,639.79	5,720.00	156,889.95	4,817.88	8,845.34	5,480.75	14,546.29
6,244.07	739.82	4,375.28	1,174.94	5,297.78		3,328.05
						2,059.04
43,883.86	6,459.82	161,265.23	5,992.82	14,143.12	5,480.75	19,933.38
1,327.79	196.00	15,583.00	3,551.85	352.00	160.00	633.00
		15,183.41	4,954.84			
1,327.79	196.00	30,766.41	8,506.69	352.00	160.00	633.00
6,100.30	280.00	69,767.59	1,682.12	1,125.08	519.25	1,453.71
		66,319.58				
		34,746.54	5,461.71			
6,100.30	280.00	170,833.71	7,143.83	1,125.08	519.25	1,453.71
51,311.95	6,935.82	362,865.35	21,643.34	15,620.20	6,160.00	22,020.09
89.2	93.9	46.3	35.9	137.2	91.5	103.4

# STATEMENT

## Balance Sheets of Electrical Departments of

### ST. LAWRENCE SYSTEM—Continued

Municipality Population	Prescott 2,723	Williams- burg P.V.	Winchester 1,058	ST. LAWRENCE SYSTEM SUMMARY
ASSETS	\$ c.	\$ c.	\$ c.	\$ c.
Lands and buildings.....	2,761.54		224.15	31,727.43
Substation equipment.....				407.79
Distribution system, overhead....	28,359.88	1,607.69	7,706.53	151,863.51
Distribution system, underground				
Line transformers.....	7,448.84	297.89	1,257.57	44,069.27
Meters.....	10,282.75	650.47	2,944.07	54,946.33
Street light equipment, regular...	1,649.64	74.41	564.98	22,092.09
Street light equip., ornamental...				
Misc. construction expense.....	1,352.20	4.00	343.94	17,349.78
Steam or hydraulic plant.....				
Old plant.....	12,108.35		1,100.00	74,597.01
Total plant.....	63,963.20	2,634.46	14,141.24	397,053.21
Bank and cash balance.....	8,384.00	719.59	8,050.04	46,651.23
Securities and investments.....				1,000.00
Accounts receivable.....	10,177.09	770.63	2,325.78	51,277.48
Inventories.....			1,723.15	6,158.65
Sinking fund on local debentures.	3,043.57			69,363.15
Equity in Hydro systems.....	3,795.10	321.03	2,347.93	26,602.31
Other assets.....				377.22
Total assets.....	89,362.96	4,445.71	28,588.14	598,483.25
Deficit.....				10,470.31
Total.....	89,362.96	4,445.71	28,588.14	608,953.56
LIABILITIES				
Debenture balance.....	16,225.66	1,832.86	9,103.85	261,102.37
Accounts payable.....			773.70	21,933.64
Bank overdraft.....				2,059.04
Other liabilities.....				
Total liabilities.....	16,225.66	1,832.86	9,877.55	285,095.05
RESERVES				
For depreciation.....	17,764.00	805.00	3,703.82	44,076.46
For equity in H.E.P.C. systems..	3,795.10	321.03	2,347.93	26,602.31
Total reserves.....	21,559.10	1,126.03	6,051.75	70,678.77
SURPLUS				
Debentures paid.....	7,753.68	917.14	1,546.15	91,145.02
Local sinking fund.....	3,043.57			69,363.15
Additional operating surplus.....	40,780.95	569.68	11,112.69	92,671.57
Total surplus.....	51,578.20	1,486.82	12,658.84	253,179.74
Total liabilities, reserves & surplus	89,362.96	4,445.71	28,588.14	608,953.56
Percentage of net debt to total assets	18.9	44.4	37.6	49.8



## "A"—Continued

## Hydro Municipalities as at December 31, 1923

RIDEAU SYSTEM						THUNDER BAY SYSTEM
Carleton Place 4,123	Kemptville 1,220	Lanark 575	Perth 3,710	Smiths Falls 6,529	RIDEAU SYSTEM SUMMARY	Port Arthur 15,629
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
5,688.32			6,600.50	20,488.10	32,776.92	34,424.49
2,471.63			3,492.82	4,845.66	10,810.11	122,419.98
28,032.68	16,013.69	4,775.50	34,494.21	66,574.77	149,890.85	260,720.04
10,303.06	3,183.95	639.33	15,142.27	16,186.34	45,454.95	29,400.98
11,739.18	3,238.43	987.37	15,322.84	22,627.99	53,915.81	55,508.04
782.46	998.18	633.84	2,509.35	1,901.41	6,825.24	30,494.40
8,278.42	5,414.29	276.12	5,187.87	7,687.50	26,844.20	21,875.58
			23,395.26	38,251.49	61,646.75	348,096.93
			2,674.25	21,473.20	24,147.45	
67,295.75	28,848.54	7,312.16	108,819.37	200,036.46	412,312.28	902,940.44
10,430.47	8,243.99	1,851.07		8,792.69	29,318.22	72,275.97
				5,000.00	5,000.00	210,393.25
2,094.37	1,495.37	285.66	39,474.94	2,001.48	45,351.82	48,389.81
2,869.81	635.56		7,404.03	2,328.82	13,238.22	25,413.60
						139,011.51
						1,007.82
82,690.40	39,223.46	9,448.89	155,698.34	218,159.45	505,220.54	1,399,432.40
				8,579.32	8,579.32	
82,690.40	39,223.46	9,448.89	155,698.34	226,738.77	513,799.86	1,399,432.40
62,441.10	23,993.29	7,057.46	102,540.84	165,678.02	361,710.71	446,862.40
3,351.52	2,499.72	21.32	4,607.53	1,984.17	12,464.26	109,709.01
			4,733.95		4,733.95	8,348.32
65,792.62	26,493.01	7,078.78	111,882.32	167,662.19	378,908.92	564,919.73
8,353.83	931.00	183.02	12,937.03	27,129.60	49,534.48	148,556.74
8,353.83	931.00	183.02	12,937.03	27,129.60	49,534.48	148,556.74
3,558.90	1,006.71	504.01	5,859.16	31,946.98	42,875.76	189,237.60
4,985.05	10,792.74	1,683.08	25,019.83		42,480.70	139,011.51
8,543.95	11,799.45	2,187.09	30,878.99	31,946.98	85,356.46	685,955.93
82,690.40	39,223.46	9,448.89	155,698.34	226,738.77	513,799.86	1,399,432.40
79.5	67.5	74.9	71.8	73.9	73.7	40.3

## STATEMENT

## Balance Sheets of Electrical Departments of

OTTAWA SYSTEM		TRENT SYSTEM				
Municipality	Ottawa	Bloomfield	Havelock	Kingston	Lakefield	
Population	112,899	512	1,258	22,234	1,193	
<b>ASSETS</b>	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	
Lands and buildings.....	197,912.77			79,464.58	86.89	
Substation equipment.....	221,197.63		572.90			
Distribution system, overhead....	480,529.63	6,954.15	17,930.88	110,519.16	17,793.24	
Distribution system, underground	238,518.03			55,359.36		
Line transformers.....	193,488.54	1,119.31	2,010.60	37,832.93	2,365.20	
Meters.....	181,500.92	1,548.74	4,331.95	70,871.25	4,431.26	
Street light equipment, regular	62,599.15	611.68	1,801.28	12,573.61	1,412.58	
Street light equip., ornamental...	29,978.05			23,177.44		
Misc. construction expense.....	34,446.06	1,403.42	4,398.98	42,401.72	3,337.14	
Steam or hydraulic plant.....				74,559.59		
Old plant.....			2,465.45	36,548.11	3,445.25	
Total plant.....	1,640,170.78	11,637.30	33,512.04	543,307.75	32,871.56	
Bank and cash balance.....	1,733.79	566.03	1,015.32	30,248.78	2,851.61	
Securities and investments.....						
Accounts receivable.....	54,479.34	551.25	822.75	17,765.34	5,306.91	
Inventories.....	21,605.27			10,846.15		
Sinking fund on local debentures..	281,648.58			48,986.61		
Equity in Hydro systems.....						
Other assets.....						
Total assets.....	1,999,637.76	12,754.58	35,350.11	651,154.63	41,030.08	
Deficit.....						
Total.....	1,999,637.76	12,754.58	35,350.11	651,154.63	41,030.08	
<b>LIABILITIES</b>						
Debenture balance.....	976,134.49	10,352.64	30,290.12	257,858.72	32,259.21	
Accounts payable.....	20,039.06	125.65		6,697.60		
Bank overdraft.....	29,947.00					
Other liabilities.....	16,951.63					
Total liabilities.....	1,043,072.18	10,478.29	30,290.12	264,556.32	32,259.21	
<b>RESERVES</b>						
For depreciation.....	454,937.87	1,221.00	958.18	28,031.42	1,921.54	
For equity in H.E.P.C. systems.....						
Total reserves.....	454,937.87	1,221.00	958.18	28,031.42	1,921.54	
<b>SURPLUS</b>						
Debentures paid.....	3,865.51	847.36	2,609.88	54,041.27	1,240.79	
Local sinking fund.....	281,648.58			48,986.61		
Additional operating surplus.....	216,113.62	207.93	1,491.93	255,539.01	5,608.54	
Total surplus.....	501,627.71	1,055.29	4,101.81	358,566.89	6,849.33	
Total liabilities, reserves & surplus	1,999,637.76	12,754.58	35,350.11	651,154.63	41,030.08	
Percentage of net debt to total assets	52.1	82.1	85.6	40.6	78.6	

## "A"—Continued

## Hydro Municipalities as at December 31, 1923

Marmora 792	Norwood 748	Omemees 485	Peterboro 21,439	Picton 3,263	Wark- worth	Wellington 840	Whitby
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
11,802.26	22,375.53	9,317.00	126,759.03	24,949.58	4,811.32	10,676.74	34,450.85
1,488.30	3,684.49	2,359.84	70,462.38	5,173.08	460.61	2,442.93	5,692.63
2,222.38	3,889.76	1,941.05	65,701.67	9,421.20	243.05	3,285.36	8,487.13
1,088.59	1,802.02	436.78	3,540.90	1,518.22	292.74	819.98	3,312.36
2,000.91	3,677.86	1,426.74	26,107.68	3,164.07	579.08	717.28	4,926.47
579.02	2,447.51		56,627.89	3,739.98	3,505.19	2,477.92	1,340.13
19,181.46	38,334.70	15,841.73	17,435.71	50,360.89	9,891.99	20,620.21	63,859.25
3,026.63	2,989.16	662.03	449,187.50	3,890.42	588.66	571.08	2,575.87
619.11	211.18	23.56	15,803.08	15,000.00		416.60	2,073.62
			16,153.85	12,884.14		165.25	366.75
			46,034.47	5,025.76			
	166.30						
22,827.20	41,701.34	16,527.32	527,178.90	87,161.21	10,480.65	21,773.14	68,875.49
					51.68		
22,827.20	41,701.34	16,527.32	527,178.90	87,161.21	10,532.33	21,773.14	68,875.49
15,838.57	35,767.09	9,935.51	330,000.00	3,074.30		15,968.48	39,642.01
203.55			10,016.25		10,532.33	107.16	4,810.02
			17,566.92				
	157.00		10,348.39				
16,042.12	35,924.09	9,935.51	367,931.56	3,074.30	10,532.33	16,075.64	44,452.03
497.15	1,297.00	1,985.51	38,753.33	2,844.99		1,966.00	1,147.00
497.15	1,297.00	1,985.51	38,753.33	2,844.99		1,966.00	1,147.00
1,827.54	1,332.91	2,064.49		2,656.02		1,031.52	16,970.49
4,460.39	3,147.34	2,541.81	46,034.47	78,585.90		2,699.98	6,305.97
6,287.93	4,480.25	4,606.30	74,459.54	81,241.92		3,731.50	23,276.46
22,827.20	41,701.34	16,527.32	120,494.01	87,161.21	10,532.33	21,773.14	68,875.49
70.7	86.1	53.4	69.7	3.5	100.4	73.8	64.5



## STATEMENT "A"—Concluded

Balance Sheets of Electrical Departments of Hydro Municipalities  
as at December 31, 1923TRENT  
SYSTEM—Continued

Municipality Population	East Whitby Twp.	West Whitby Twp.	TRENT SYSTEM SUMMARY	ALL SYSTEMS GRAND SUMMARY
	\$ c.	\$ c.	\$ c.	\$ c.
<b>ASSETS</b>				
Lands and buildings.....			131,513.38	4,488,054.93
Substation equipment.....			40,225.52	6,015,919.75
Distribution system, overhead....	704.50	9,207.42	408,251.66	13,135,581.76
Distribution system, underground			55,359.36	1,959,120.41
Line transformers.....	2,459.31	2,329.96	139,881.57	4,211,655.89
Meters.....	787.22	1,207.75	178,369.77	4,548,933.73
Street light equipment, regular...		721.76	29,932.50	1,061,473.85
Street light equip., ornamental...			49,285.12	708,431.22
Misc. construction expense.....	48.97	33.11	124,743.64	3,681,274.88
Steam or hydraulic plant.....			74,559.57	566,619.86
Old plant.....			73,984.27	8,051,496.28
Total plant.....	4,000.00	13,500.00	1,306,106.38	48,428,562.56
Bank and cash balance.....			48,985.59	1,276,140.06
Securities and investments.....			15,000.00	1,153,424.47
Accounts receivable.....			56,477.54	3,198,769.34
Inventories.....			32,557.76	1,819,711.62
Sinking fund on local debentures.			95,021.08	3,896,261.28
Equity in Hydro systems.....				2,929,603.94
Other assets.....			166.30	190,071.63
Total assets.....	4,000.00	13,500.00	1,554,314.65	62,892,544.90
Deficit.....			51.68	132,793.70
Total.....	4,000.00	13,500.00	1,554,366.33	63,025,338.60
<b>LIABILITIES</b>				
Debenture balance.....	3,386.91	11,431.22	795,804.78	33,056,501.29
Accounts payable.....			32,492.56	3,708,781.76
Bank overdraft.....			17,566.92	680,714.59
Other liabilities.....			10,505.39	1,517,828.47
Total liabilities.....	3,386.91	11,431.22	856,369.65	38,963,826.11
<b>RESERVES</b>				
For depreciation.....			80,623.12	7,328,858.69
For equity in H.E.P.C. systems..				2,929,603.94
Total reserves.....			80,623.12	10,258,462.63
<b>SURPLUS</b>				
Debentures paid.....	613.09	2,068.78	87,304.14	2,852,038.38
Local sinking fund.....			95,021.08	3,896,261.28
Additional operating surplus.....			435,048.34	7,054,750.20
Total surplus.....	613.09	2,068.78	617,373.56	13,803,049.86
Total liabilities, reserves & surplus	4,000.00	13,500.00	1,554,366.33	63,025,338.60
Percentage of net debt to total assets	84.7	84.7	55.1	64.9

## HYDRO-ELECTRIC POWER COMMISSION BALANCE SHEETS

being

FINANCIAL STATEMENTS COMBINING

**The Hydro-Electric Power Commission of Ontario Plants and Reserves  
with the Assets, Liabilities, Reserves and Surpluses of Hydro  
Municipalities Operating under Cost Contracts.**

**FOR ALL SYSTEMS**

**December 31, 1923**

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The Commission submits herewith a statement of the assets, liabilities, reserves and surpluses of all Hydro systems, reflecting the operations of the Hydro-Electric Power Commission of Ontario and the co-operating municipalities since the commencement of operation to December 31, 1923.

### **Explanation of the Various Columns of the Balance Sheets**

**Column 1**—Gives the names of the municipalities now under contract with the Hydro-Electric Power Commission of Ontario for a supply of electrical energy, and the dates upon which each municipality commenced to receive this supply of power.

**Column 2**.—Gives the average electrical horsepower delivered to each municipality by the Hydro-Electric Power Commission of Ontario during the year.

### **ASSETS**

**Column 3**—Shows the cost of the plant of the Hydro-Electric Power Commission as annually adjusted and apportioned to each municipality having a contract with the Commission and receiving power from the systems during the year. The various properties constituting the plant are owned and operated by the Commission. They comprise all generating equipment at Niagara Falls and at other points, also the transformer stations and transmission lines necessary to transform the power and transmit it to the municipalities. The whole plant is administered, operated and maintained by the Hydro-Electric Power Commission for the contracting municipalities by means of revenue derived from the sale, on the basis of COST, of electrical energy to the municipalities and to sundry other customers.

**NOTE.**—In so far as the Niagara system is concerned the investment in generating plants at Niagara Falls (Queenston Development, Ontario Power Company and the Toronto Power Company) has not as yet been apportioned to the contracting municipalities of the system in such a way as to show the liability or responsibility each is assuming in respect thereto. Up to the present time these properties have been operated in conjunction with the Niagara system,

but as separate units. All expenses of operation, etc., have, however, been taken up in the power costs to the municipalities and other customers.

In the year 1924 these properties will be transferred to the Hydro-Electric Power Commission of Ontario (see the Power Commission and Companies' Transfer Act, 1924) and will become an integral part of the Niagara system, and the investment therein will then be apportioned or adjusted annually to the contracting municipalities in the same manner as now obtains in respect to the transformer stations and transmission lines, thus reflecting the full share of the investment each municipality assumes.

**Column 4**—Gives the cost of plants within the boundaries of the respective municipalities. These plants are financed, operated and maintained by the municipalities from the revenue derived from the utilities' customers.

**Column 5**—Shows the bank balance and investment of surplus funds in Government bonds and other authorized securities and investments made by each municipal Hydro-Electric utility.

**Column 6**—Gives the sinking funds, in respect of local plants on deposit with municipal treasurers; sinking funds in respect of the Commission's plants on deposit with the Commission and invested in provincial securities, also accounts receivable and inventories, together with depreciation and renewals reserves deposited with the Hydro-Electric Power Commission of Ontario for the purpose of renewing its property.

NOTE.—Among other charges, the cost of power to the Commission as charged to municipalities includes an annual levy (after the five-year exemption period according to the Power Commission Act) for sinking fund for the specific purpose of liquidating the Commission's debt to the Provincial Government, and also includes a renewals reserve fund for the replacement of transforming and transmitting equipment. These accumulations represent a municipal equity in present and future plants and therefore the sum of both these funds is reflected as an asset.

**Column 7**—Totals columns 3, 4, 5 and 6 and shows the total investment of each municipality.

## LIABILITIES

**Column 8**—Gives the municipalities' liability in respect to the Hydro-Electric Power Commission's plants. The total of this column represents the sum invested by the Commission in stations, lines and generating plants (see column 3), which sum is being repaid by the contracting municipalities by deposits to the Commission's sinking fund collected in the cost of power. These sinking funds, in accordance with the Power Commission Act, are invested in provincial securities.

**Column 9**—Shows the municipal debenture debt in respect of Hydro municipal plants within the municipal boundaries. This debt is created by the issuance of municipal serial or sinking fund debentures, which, in the majority of cases, are redeemable in twenty years.

**Column 10**—Gives the municipal accounts payable and other liabilities of the municipalities.

**Column 11**—Gives the total liability of the municipalities in respect of local plants and the Commission's property.



## RESERVES

**Column 12**—Shows the reserves arising from sinking fund payments and municipal debenture retirals in respect of local plants and the Hydro Commission's stations and lines.

**NOTE.**—The cost of power to the Commission as charged to municipalities includes, amongst other charges, an annual levy (after the five-year exemption period provided for in the Power Commission Act) for sinking fund for the purpose of liquidating the Hydro-Electric Power Commission's debt to the Provincial Government. The total of the sums so paid in accordance with provisions of the Act, are invested in provincial securities.

**Column 13**—Shows reserve fund provided by the municipalities for renewing local plants and the Commission's property (see column 6).

**NOTE.**—The cost of power to the Commission as charged to municipalities includes, amongst other charges, an annual levy in respect of a renewals fund for the purpose of renewing development plants, transformer stations and transmission lines.

## SURPLUS

**Column 14**—Shows the sum which municipal Hydro utilities of the Niagara system have accumulated after having met, or having made provision to meet, every expense on account of interest, operation and maintenance, and after meeting all debenture payments, sinking fund, renewal and contingency charges both for local systems and for the provincial Hydro properties at present in operation.

**Column 15**—Totals reserves and surpluses as given in columns 12, 13 and 14.

# STATEMENT COMBINING THE HYDRO-ELECTRIC POWER COMMISSION'S OF THE HYDRO MUNICIPAL UTILITIES,

## ASSETS

Municipality	Date commenced operation	Average electrical horsepower taken during the year 1923	Hydro-Electric Power Commission's plant (See preceding explanatory statement under heading "Assets", Column 3)	Plant value with- in the boundaries of the municipali- ties	Bank balances and invest- ments in securities (municipal- ities only)	Accounts receivable, inventories and other assets	Total assets or municipali- ties' investments
NIAGARA							
Acton	Jan., 1913	341.2	\$ 44,298.68	\$ 34,282.35	\$ 1,000.00	\$ 16,528.41	\$ 96,109.44
Agincourt	Nov., 1922	27.6	2,216.73	8,632.83	867.56	350.54	12,067.66
Ailsa Craig	Jan., 1916	110.0	32,976.26	11,649.84	3,564.00	7,648.56	55,838.66
Alvinston	April, 1922	69.2	41,470.85	22,824.60	1,259.07	3,238.76	68,793.28
Aylmer	Mar., 1918	228.8	50,791.13	44,623.37	12,954.35	11,229.49	119,598.34
Ayr	Jan., 1915	84.9	13,305.09	16,693.50	1,726.06	7,567.64	39,292.29
Baden	May, 1912	219.0	29,394.29	10,350.32	6,385.82	12,555.58	58,686.01
Barton Township	1919			78,271.31	4,928.76		83,200.07
Beachville	Aug., 1912	344.7	40,912.72	14,581.17	8,194.49	14,998.80	78,687.18
Belle River	Dec., 1922	45.7	14,743.55	14,089.90	9.60	3,394.97	32,238.02
Blenheim	Nov., 1915	174.5	36,645.05	30,845.03	893.52	11,942.07	80,325.67
Bolton	Feb., 1915	135.0	40,341.90	21,172.99	1,015.45	12,736.44	75,266.78
Bothwell	Sept., 1915	146.0	32,010.21	8,341.21	6,417.41	13,532.11	60,300.94
Brampton	Nov., 1911	1,215.3	122,202.33	106,260.86	31,059.42	40,010.90	299,533.51
Brantford	Feb., 1914	6,380.1	399,022.88	575,683.36	8,550.68	189,384.79	1,172,641.71
Brigden	Jan., 1918	50.0	27,048.13	10,780.79	1,026.59	5,618.95	44,474.46
Burford	June, 1915	61.7	17,266.17	10,809.38	2,213.96	6,968.81	37,258.32
Burgessville	Nov., 1916	32.8	7,696.72	4,116.31	1,228.62	1,700.03	14,741.68
Caledonia	Oct., 1912	113.1	10,922.07	13,138.93	1,713.36	3,487.27	29,261.63
Chatham	Feb., 1915	3,181.9	307,153.66	438,020.76	50.00	123,048.58	868,273.00
Chippawa	Sept., 1919	78.5	4,085.67	19,010.11	2,947.02	1,021.22	27,064.02
Clinton	Mar., 1914	266.9	57,076.89	50,816.10		30,485.72	138,378.71
Comber	May, 1915	115.0	27,515.55	10,279.88	520.00	8,306.80	46,622.23
Dashwood	Sept., 1917	47.5	19,468.45	4,356.44	4.68	3,796.72	27,626.29
Delaware	Mar., 1915	16.6	4,174.01	3,554.55	278.17	3,859.82	11,866.55
Dereham Township	Sept., 1919	73.4	11,605.75	25,323.46	1,582.48	5,243.22	43,754.91
Dorchester	Dec., 1914	29.8	5,031.34	9,809.42	2,920.86	1,813.73	19,373.35
Drayton	Mar., 1918	55.9	27,039.58	11,085.96	4,504.46	4,326.71	46,956.71
Dresden	April, 1915	202.8	27,484.34	26,681.10	5,404.94	11,042.93	70,613.31
Drumbo	Dec., 1914	28.3	5,209.17	5,358.18	1,029.05	2,830.68	14,427.08
Dublin	Oct., 1917	29.8	10,216.38	6,657.40	301.30	1,081.22	18,356.30
Dundas	Jan., 1911	1,145.6	61,501.40	108,214.60	9,247.99	33,544.20	212,508.19
Dunnville	June, 1918	348.1	82,316.62	87,755.61		15,091.22	185,163.45
Dutton	Sept., 1915	130.0	19,681.10	12,891.25	1,961.33	9,323.60	43,857.28
Elmira	Nov., 1913	481.6	64,444.27	45,703.87	503.07	21,491.87	132,143.08
Elora	Nov., 1914	280.4	44,974.14	25,409.65	2,375.57	16,723.28	89,482.64
Embro	Jan., 1915	49.5	18,696.02	9,828.37	1,590.66	5,921.92	36,036.97
Etobicoke Township	Aug., 1917	752.0	63,327.28	159,299.19	12,391.12	25,419.28	260,436.87
Exeter	June, 1916	235.0	55,372.29	29,777.92	1,783.00	20,166.88	106,600.09
Fergus	Nov., 1914	274.0	44,607.09	36,160.20	3,387.45	14,742.88	98,897.62
Ford City	Nov., 1922	1,217.6	150,682.52	91,170.52		22,007.35	263,860.39
Forest	Mar., 1917	117.8	35,248.21	43,242.01	4,405.17	15,036.40	97,931.79
Galt	May, 1911	4,318.6	339,420.65	730,526.48	175.00	255,771.04	1,325,893.17
Georgetown	Sept., 1913	655.1	114,076.15	47,659.21	14,063.75	38,681.58	214,480.69
Glencoe	Aug., 1920	80.4	37,236.07	25,768.67	1,219.62	6,261.12	70,485.48
Goderich	Feb., 1914	562.4	155,293.09	116,403.81	4,194.36	64,512.86	340,404.12
Grantham Township	May, 1915	68.8	28,262.87	18,844.58		12,158.12	59,265.57
Granton	July, 1916	50.3	14,774.64	5,289.47	2,852.78	3,202.68	26,119.57
Guelph	Dec., 1910	5,268.4	342,248.14	371,665.71	25,000.00	202,941.37	941,855.22
Hagersville	Sept., 1913	480.5	63,077.31	23,053.90	5,089.83	17,556.35	108,777.39
Hamilton	Feb., 1911	21,283.9	1,620,332.99	2390,669.54	52,095.12	981,232.74	5,044,330.39
Harriston	July, 1916	214.0	53,157.40	21,410.85	2,250.67	12,456.21	89,275.13
Hensall	Jan., 1917	56.2	22,618.57	13,216.84	2,639.48	6,658.75	45,133.64
Hespeler	Feb., 1911	527.7	52,808.51	63,600.01	1,176.11	20,182.06	137,766.69
Highgate	Dec., 1916	60.3	16,217.42	7,446.30	2,668.78	4,343.68	30,676.18
Ingersoll	May, 1911	1,051.0	92,672.02	137,128.87	22,632.40	98,687.14	342,120.43
Kitchener	Jan., 1911	8,896.9	679,572.53	682,135.04	23,649.06	258,502.45	1,643,859.08
Lambeth	April, 1915	45.2	11,365.41	7,662.88	110.32	4,070.39	23,209.00
Listowel	June, 1916	416.9	73,449.73	65,981.97	2,277.52	19,213.65	160,922.87
London	Jan., 1911	17,931.9	1,296,454.84	1,981,840.35	1,546.67	1062,191.47	4,342,033.33

\*Denotes deficit.

# PLANT AND RESERVES WITH THE ASSETS, LIABILITIES AND RESERVES AS AT DECEMBER 31, 1923

LIABILITIES				RESERVES AND SURPLUSES			
Municipalities' liability in respect to Hydro-Electric Power Commission's plants	Municipal debenture debt	Accounts payable and other liabilities (municipalities only)	Total liabilities	Debentures paid, sinking fund and other reserves	Plant renewal reserves	Surplus	Total reserves and surpluses

## SYSTEM

\$	c.	\$	c.	\$	c.	\$	c.	\$	c.	\$	c.	\$	c.	\$	c.
44,298.68		5,247.71		1,143.03		50,689.42		14,223.45		13,329.72		17,866.85		45,420.02	
2,216.73		7,770.91				9,987.64		350.98		199.55		1,529.49		2,080.02	
32,976.26		3,490.24		154.74		36,621.24		2,944.40		7,893.06		8,379.96		19,217.42	
41,470.85		22,392.91		49.64		63,913.40		1,350.71		1,223.77		2,305.40		4,879.88	
50,791.13		30,389.17		60.00		81,240.30		9,746.89		10,753.22		17,857.93		38,358.04	
13,305.09		6,732.62				20,037.71		7,309.11		6,841.18		5,104.29		19,254.58	
29,394.29		3,802.11		782.86		33,979.26		5,921.11		10,324.76		8,460.88		24,706.75	
		44,619.28		26,950.13		71,569.41		8,803.38		2,484.00		343.28		11,630.66	
40,912.72		4,096.50		84.50		45,093.72		6,628.98		12,300.46		14,664.02		33,593.46	
14,743.55		8,500.00		1,247.86		24,491.41		81.54		438.19		7,322.88		7,746.61	
36,645.05		12,247.31		1,482.97		50,375.33		5,065.21		13,211.56		11,673.57		29,950.34	
40,341.90		10,330.78		7,620.20		58,292.88		5,172.97		14,471.31		*2,670.38		16,973.90	
32,010.21		4,374.03		1,057.01		37,441.25		4,316.91		10,502.56		8,040.22		22,859.69	
122,202.33		45,097.70		870.76		168,170.79		41,670.58		55,263.51		34,428.63		131,362.72	
399,022.88		389,250.00		53,766.14		842,039.02		147,160.24		135,636.02		47,806.43		330,602.69	
27,048.13		3,051.49		2,000.04		32,099.66		5,786.83		5,345.34		1,242.63		12,374.80	
17,266.17		7,325.71		23.48		24,615.36		2,933.88		5,735.27		3,973.81		12,642.96	
7,696.72		2,557.47		194.40		10,448.59		1,323.14		2,021.95		948.00		4,293.09	
10,922.07		3,655.53		.46		14,578.06		2,450.53		4,894.00		7,339.04		14,683.57	
307,153.66		241,149.26		90,910.09		639,213.01		52,151.20		93,586.78		83,322.01		229,059.99	
4,085.67		12,144.81		1,564.97		17,795.45		1,850.22		1,619.94		5,798.41		9,268.57	
57,076.89		40,500.00		900.77		98,477.66		13,661.30		20,405.90		5,833.85		39,901.05	
27,515.55		5,553.37		59.23		33,128.15		3,904.67		7,120.02		2,469.39		14,934.08	
19,468.45		3,012.08		.31		22,480.84		1,020.53		3,893.96		230.96		5,145.45	
4,174.01		3,336.01		430.62		7,940.64		991.47		1,675.45		1,258.99		3,925.91	
11,605.75		19,260.24		5,812.70		36,678.69		5,238.45		7,408.98		*5,571.21		7,076.22	
5,031.34		3,682.01		102.31		8,815.66		1,135.93		2,926.92		6,696.84		10,759.69	
27,039.58		8,661.80				35,701.38		1,215.76		5,377.66		4,661.91		11,255.33	
27,484.34		10,224.99				37,709.33		8,690.39		11,006.97		13,206.62		32,903.98	
5,209.17		3,753.13		40.47		9,002.77		1,334.35		2,740.25		1,349.71		5,424.31	
10,216.38		4,850.43		1,031.88		16,098.69		1,567.16		2,042.63		*1,452.18		2,157.61	
61,501.40		42,548.69		3,265.93		107,316.02		26,059.06		40,512.07		38,621.04		105,192.17	
82,316.62		59,181.15		5,149.20		146,646.97		8,443.21		19,678.08		10,395.19		38,516.48	
19,681.10		7,415.50		13.25		27,109.85		2,845.98		7,174.36		6,727.09		16,747.43	
64,444.27		16,665.54		141.00		81,250.81		9,675.98		18,382.54		22,833.75		50,892.27	
44,974.14		9,630.57				54,604.71		8,031.83		14,378.47		12,467.63		34,877.93	
18,696.02		6,608.08		1,112.67		26,416.77		2,618.77		6,967.80		33.63		9,620.20	
63,327.28		107,168.88		2,204.69		172,700.85		20,696.71		30,261.22		36,778.09		87,736.02	
55,372.29		15,998.48		79.68		71,450.45		8,903.28		13,883.56		12,362.80		35,149.64	
44,607.09		27,513.62		158.79		72,279.50		6,372.51		14,206.68		6,038.93		26,618.12	
150,682.52		87,287.37		4,776.66		242,746.55		6,602.42		6,384.23		8,127.19		21,113.84	
35,248.21		22,653.98		527.20		58,429.39		13,217.94		12,504.80		13,779.66		39,502.40	
339,420.65		506,681.69		100,986.53		947,088.87		153,804.81		140,994.12		84,005.37		378,804.30	
114,076.15		16,665.53				130,741.68		15,279.13		36,477.78		31,982.10		83,739.01	
37,236.07		18,477.45		16.90		55,730.42		3,834.14		3,779.38		7,141.54		15,755.06	
155,293.09		37,553.45		21,781.03		214,627.57		36,858.70		64,848.11		24,069.74		125,776.55	
28,262.87		10,564.11		7,781.74		46,608.72		8,189.67		3,642.11		825.07		12,656.85	
14,774.64		3,061.82		653.01		18,489.47		1,210.35		3,392.19		3,027.56		7,630.10	
342,248.14		90,147.59		52,915.79		485,311.52		138,914.13		123,903.60		191,725.97		456,543.70	
63,077.31		6,197.15				69,274.46		8,187.57		10,871.53		20,443.83		39,502.93	
1,620,332.99		1,711,972.66		496,814.83		3,829,120.48		550,203.96		535,568.78		129,437.17		1,215,209.91	
53,157.40		13,806.64		117.76		67,081.80		7,409.17		12,397.82		2,386.34		22,193.33	
22,618.57		10,620.34		1,180.84		34,419.75		3,052.92		7,156.95		504.02		10,713.89	
52,808.51		27,015.56		4,946.50		84,770.57		28,422.80		14,292.96		10,280.36		52,996.12	
16,217.42		4,387.25				20,604.67		1,605.99		4,219.98		4,245.54		10,071.51	
92,672.02		79,800.00		12,257.01		184,729.03		48,438.26		49,054.35		59,898.79		157,391.40	
679,572.53		254,003.55		108,553.09		1,042,129.17		234,868.41		220,941.28		145,920.22		601,729.91	
11,365.41		3,499.24		111.00		14,479.65		1,195.10		3,466.86		3,571.39		8,233.35	
73,449.73		29,479.25		7,436.59		110,365.57		18,512.06		20,686.45		11,358.79		50,557.30	
1,296,454.84		1,204,175.38		356,740.35		2,857,370.57		488,648.06		596,366.86		399,647.84		1,484,662.76	



**STATEMENT COMBINING THE HYDRO-ELECTRIC POWER COMMISSION'S  
OF THE HYDRO MUNICIPAL UTILITIES.**

**ASSETS**

Municipality	Date commenced operation	Average electrical horsepower taken during the year 1923	Hydro-Electric Power Commission's plant (See preceding explanatory statement under heading "Assets" Column 3)	Plant value within the boundaries of the municipalities	Bank balances and investments in securities (municipalities only)	Accounts receivable, inventories and other assets	Total assets or municipalities' investments
<b>NIAGARA</b>							
			\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
London Township.....	Sept., 1917			9,496.07	3,500.17	2,153.88	15,150.12
Lucan.....	Feb., 1915	124.3	21,237.33	16,810.59	9,755.48	8,613.18	56,416.58
Lynden.....	Nov., 1915	107.9	24,896.54	5,413.07	1,313.61	7,648.38	39,271.60
Markham.....	April, 1920	80.8	33,294.28	17,759.03	2,787.04	2,348.99	56,189.34
Merlin.....	Dec., 1922	99.2	26,510.53	12,472.63	1,412.26	2,091.95	42,487.37
Merritton.....	Nov., 1920	335.3	1,556.31	30,600.17	2,932.87	2,047.57	37,136.92
Milton.....	April, 1913	1,033.7	116,753.15	41,717.51	13,071.15	39,173.25	210,715.06
Milverton.....	June, 1916	364.0	54,027.38	18,647.55	75.62	16,038.05	88,788.60
Mimico.....	May, 1912	827.1	77,387.35	91,365.54	8,212.24	15,539.48	192,504.61
Mitchell.....	Sept., 1911	269.2	38,045.21	57,770.69	4,269.64	20,252.40	120,337.94
Moorefield.....	Mar., 1918	33.5	14,392.46	4,750.24	939.94	2,073.08	22,155.72
Mount Brydges.....	Mar., 1915	30.8	7,744.54	6,003.15	2,183.19	4,954.37	20,885.25
Newbury.....	Mar., 1921	27.3	9,402.81	9,169.57	120.84	1,965.88	20,659.10
New Hamburg.....	Mar., 1911	310.2	42,349.11	34,912.79	905.95	24,379.94	102,547.79
New Toronto.....	Feb., 1914	2,545.8	232,274.27	72,409.76	2,220.49	79,904.05	386,808.57
Niagara Falls.....	Dec., 1915	4,895.7	36,541.78	577,937.01	600.00	92,425.09	707,503.88
Niagara-on-the-Lake....	Aug., 1919	208.0	8,437.61	25,148.41	462.86	2,753.76	36,802.64
Norwich.....	May, 1912	306.0	42,276.81	27,433.60	8,285.12	21,136.87	99,132.40
Norwich, North Twp....	Nov., 1913			5,937.64	88.36		6,026.00
Norwich, South Twp....	Jan., 1917			5,218.96			5,218.96
Oil Springs.....	Feb., 1918	267.4	42,239.90	21,857.19	2,036.06	10,946.88	77,080.03
Otterville.....	Feb., 1916	42.3	9,955.54	7,247.38	3,762.46	2,187.97	23,153.35
Palmerston.....	July, 1916	226.4	44,125.92	33,244.97	1,322.53	23,617.03	102,310.45
Paris.....	Feb., 1914	991.8	70,063.64	132,037.32	3,024.21	47,556.97	252,682.14
Parkhill.....	May, 1920	72.0	37,396.42	20,453.19	3,368.12	3,518.18	64,735.91
Petrolia.....	May, 1916	763.7	120,530.92	74,896.36	4,000.00	37,680.25	237,107.53
Plattsville.....	Dec., 1914	30.6	13,821.06	5,850.64		7,995.56	27,667.26
Point Edward.....	1917	144.9	19,256.71	16,643.19		11,038.67	46,938.57
Port Colborne.....	Mar., 1920	469.1	2,177.14	76,399.91	197.46	12,595.23	91,369.74
Port Credit.....	Aug., 1912	175.2	20,065.49	23,545.80	2,600.00	5,143.43	51,354.72
Port Dalhousie.....	Nov., 1912	180.6	5,785.42	29,678.98	428.20	6,157.23	42,049.83
Port Dover.....	Dec., 1921	82.8	22,452.30	31,358.84		863.47	54,674.61
Port Stanley.....	Apr., 1912	205.9	40,105.77	32,483.47	4,375.15	19,396.79	96,361.18
Preston.....	Jan., 1911	2,020.9	150,572.66	193,102.11		62,638.66	406,313.43
Princeton.....	Jan., 1915	22.2	9,412.36	4,144.40	87.84	3,337.73	16,982.33
Queenston.....	Mar., 1921	42.6	1,125.37	10,824.58	738.76	406.12	13,094.83
Ridgetown.....	Dec., 1915	249.7	45,282.38	33,562.89	17,559.08	16,817.67	113,222.02
Riverside.....	Nov., 1922	215.8	33,539.72	49,191.88		5,173.94	87,905.54
Rockwood.....	Sept., 1913	61.1	15,253.61	9,941.62	62.34	5,713.70	30,571.27
Rodney.....	Feb., 1917	58.6	13,393.36	12,456.08	5,340.48	4,245.57	35,435.49
St. Catharines.....		5,092.7	42,169.60	459,115.11	484.40	72,971.01	574,740.12
St. Clair Beach.....	Nov., 1922	32.4	5,423.85	7,482.15		1,646.19	14,552.19
St. George.....	Sept., 1915	74.5	15,543.22	7,033.05	7,324.31	4,874.96	34,775.54
St. Jacobs.....	Sept., 1917	41.5	7,498.37	8,491.27	3,010.47	2,374.29	21,374.40
St. Marys.....	May, 1911	742.8	91,256.71	122,792.51	1,109.10	58,642.08	273,800.40
St. Thomas.....	April, 1911	3,328.9	271,848.79	340,275.55	21,068.09	181,424.52	814,616.95
Sarnia.....	Dec., 1916	3,798.2	504,767.82	521,690.86	10,255.11	135,855.72	1,172,562.51
Scarboro Township.....	Aug., 1918	510.8	11,725.67	195,778.11	5,567.48	13,901.48	226,972.74
Seaforth.....	Nov., 1911	411.3	69,796.36	48,821.70	7,056.03	53,151.22	178,825.31
Simcoe.....	Aug., 1915	422.3	45,983.62	60,570.14	6,000.00	11,902.85	124,456.61
Springfield.....	Aug., 1917	25.0	10,220.32	7,077.33	1,147.97	1,755.92	20,201.54
Stamford Township....	Nov., 1916	610.5	9,918.48	118,556.58	1,941.48	14,952.46	145,369.00
Stouffville.....	Sept., 1923	6.6	22,417.85	16,290.49	506.82	35.36	39,250.52
Stratford.....	Jan., 1911	4,301.3	422,517.33	499,700.24	3,000.00	264,626.96	1,189,844.53
Strathroy.....	Dec., 1914	496.2	87,003.83	81,964.30	1,502.37	40,110.66	210,581.16
Sutton.....	Aug., 1923	7.8	5,311.79	20,089.73	351.19	563.17	26,315.88
Tavistock.....	Nov., 1916	170.2	37,724.10	17,690.37	10,456.41	10,173.27	75,062.15
Tecumseh.....	Nov., 1922	91.7	14,223.23	28,837.64		2,291.92	45,352.79
Thamesford.....	Feb., 1914	93.7	20,722.12	9,332.79	3,748.39	7,401.92	41,205.22
Thamesville.....	Oct., 1915	82.6	16,216.87	16,565.42	7,220.63	6,458.25	46,461.17

\*Denotes deficit.

PLANT AND RESERVES WITH THE ASSETS, LIABILITIES AND RESERVES  
AS AT DECEMBER 31, 1923—Continued

Municipalities' liability in respect to Hydro- Electric Power Commission's plants	LIABILITIES			RESERVES AND SURPLUSES			
	Municipal debenture debt	Accounts payable and other liabilities (municipali- ties only)	Total liabilities	Debentures paid, sinking fund and other reserves	Plant renewal reserve	Surplus	Total reserves and surpluses

## SYSTEM

\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
.....	12,608.10	.....	12,608.10	891.90	1,500.00	150.12	2,542.02
21,237.33	8,370.00	330.56	29,937.89	5,379.58	9,468.81	11,630.30	26,478.69
24,896.54	3,892.05	.....	28,788.59	2,741.07	6,310.41	1,431.53	10,483.01
33,294.28	9,222.22	460.24	42,976.74	2,821.45	2,860.28	7,530.87	13,212.60
26,510.53	8,273.80	4,444.57	39,228.90	408.19	295.65	2,554.63	3,258.47
1,556.31	3,474.06	703.66	5,734.03	3,445.72	2,146.24	25,810.93	31,402.89
116,753.15	11,385.12	15,857.59	143,995.86	25,572.81	29,840.47	11,305.92	66,719.20
54,027.38	6,850.83	3,633.37	64,511.58	9,909.35	9,909.35	8,020.01	24,277.02
77,387.35	38,170.34	27,625.22	143,182.91	14,942.97	22,925.75	11,452.98	49,321.70
38,045.21	5,125.97	496.23	43,667.41	23,095.94	27,887.53	25,687.06	76,670.53
14,392.46	3,629.03	.....	18,021.49	1,092.42	2,418.61	623.20	4,134.23
7,744.54	3,564.10	.....	11,308.64	1,551.08	4,050.37	3,975.16	9,576.61
9,402.81	9,400.00	.....	17,802.81	1,501.60	696.98	657.71	2,856.29
42,349.11	13,201.13	.....	55,550.24	10,955.11	21,710.55	14,331.89	46,997.55
232,274.27	6,485.55	3,062.72	241,822.54	34,203.37	47,695.94	63,086.72	144,986.03
36,541.78	309,068.66	93,552.61	439,163.05	151,577.64	46,410.55	70,352.64	268,340.83
8,437.61	6,600.77	461.50	15,499.88	5,555.14	2,587.13	13,160.49	21,302.76
42,276.81	10,608.60	.....	52,885.41	8,814.04	19,984.53	17,448.42	46,246.99
.....	4,897.26	.....	4,897.26	1,128.74	.....	.....	1,128.74
.....	4,140.84	.....	4,140.84	1,078.12	.....	.....	1,078.12
42,239.90	13,747.08	3,482.35	59,469.33	4,418.58	5,881.61	7,310.51	17,610.70
9,955.54	3,289.24	.....	13,244.78	1,684.37	2,775.34	5,448.86	9,908.57
44,125.92	11,536.33	535.21	56,197.46	18,058.93	11,479.35	16,574.71	46,112.99
70,063.64	55,645.12	.....	125,708.76	70,487.27	40,346.79	16,139.32	126,973.38
37,396.42	13,118.97	.....	50,515.39	1,927.75	3,656.45	8,636.32	14,220.52
120,530.92	41,879.81	1,177.28	163,588.01	15,785.65	27,853.86	29,880.01	73,519.52
13,821.06	4,367.83	1,320.51	19,509.40	3,064.40	7,297.34	*2,203.88	8,577.86
19,256.71	5,116.72	8,872.83	33,246.26	3,354.81	6,458.18	3,879.32	13,692.31
2,177.14	60,346.69	7,795.83	70,319.66	9,352.05	4,279.91	7,418.12	21,050.08
20,065.49	5,702.94	1,801.18	27,569.61	4,857.59	7,774.90	11,152.62	23,785.11
5,785.42	18,754.22	2,141.85	26,681.49	6,086.43	4,430.00	4,851.91	15,368.34
22,452.30	19,182.58	6,465.96	48,100.84	2,169.09	1,679.72	2,724.96	6,573.77
40,105.77	14,065.07	.....	54,170.84	10,741.98	21,135.72	10,312.64	42,190.34
150,572.66	51,086.28	44,901.18	246,560.12	70,093.76	68,977.56	20,681.93	159,753.38
9,412.36	2,960.81	389.24	12,762.41	1,416.39	3,133.38	*329.85	4,219.92
1,125.37	7,551.99	2,095.55	10,772.91	674.72	380.82	1,266.38	2,321.92
45,282.38	12,762.00	1,365.35	59,409.73	10,394.47	13,907.73	29,510.09	53,812.29
33,539.72	40,930.77	4,300.56	78,771.05	2,650.88	2,410.49	4,073.12	9,134.49
15,253.61	.....	25.90	15,279.51	3,570.55	6,363.77	5,357.44	15,291.76
13,393.36	7,529.97	327.50	21,250.83	1,685.45	4,331.52	8,167.69	14,184.66
42,169.60	206,400.52	51,566.02	300,136.14	81,916.42	75,044.00	117,643.56	274,603.98
5,423.85	6,171.80	2,069.50	13,665.15	331.30	207.11	348.63	887.04
15,543.22	5,067.59	13.85	20,624.66	2,241.80	4,569.63	7,339.45	14,150.88
7,498.37	4,814.59	1,000.00	13,312.96	1,675.47	2,296.08	4,089.89	8,061.44
91,256.71	49,563.97	1,142.97	141,963.65	63,047.39	58,782.07	10,007.29	131,836.75
271,848.79	80,964.38	22,168.66	374,981.83	112,669.17	139,984.50	186,981.45	439,635.12
504,767.82	248,408.61	46,877.33	800,053.76	83,662.31	128,281.62	160,571.82	372,515.75
11,725.67	108,167.54	60,764.91	180,658.12	10,581.21	11,788.11	23,945.30	46,314.62
69,796.36	25,000.00	3.00	94,799.36	20,301.30	41,159.42	22,565.23	84,025.95
45,983.62	33,784.12	6,891.73	86,659.47	4,994.82	16,339.66	16,462.66	37,797.14
10,220.32	1,763.29	408.36	12,391.97	3,431.45	1,561.18	2,816.94	7,809.57
9,918.48	95,298.26	1,620.66	106,837.40	11,486.16	11,505.93	15,539.51	38,531.60
22,417.85	15,740.27	827.14	38,985.26	11.78	23.58	229.90	265.26
422,517.33	362,000.00	70,747.41	855,264.74	161,511.71	151,702.80	21,365.28	334,579.79
87,003.83	33,203.45	1,907.66	122,114.94	21,582.44	30,583.74	36,300.04	88,466.22
5,311.79	.....	21,143.58	26,455.37	13.92	44.32	*197.73	*139.49
37,724.10	5,264.69	2,606.45	45,595.24	3,757.22	9,140.52	16,569.17	29,466.91
14,223.23	24,850.97	4,121.90	43,196.10	1,641.30	1,380.62	*865.23	2,156.69
20,722.12	3,920.89	16.28	24,659.29	3,566.93	7,423.63	5,555.37	16,545.93
16,216.87	8,761.38	12.96	24,991.21	3,974.25	6,840.08	10,655.63	21,469.96



# STATEMENT COMBINING THE HYDRO-ELECTRIC POWER COMMISSION'S OF THE HYDRO MUNICIPAL UTILITIES,

## ASSETS

Municipality	Date commenced operation	Average electrical horsepower taken during the year 1923	Hydro-Electric Power Commission's plant (See preceding explanatory statement under heading, "Assets", Column 3)	Plant value with- in the boundaries of the municipali- ties	Bank balances and invest- ments in securities (municipal- ities only)	Accounts receivable, inventories and other assets	Total assets or municipali- ties' investments
<b>NIAGARA</b>							
Thedford.....	May, 1922	43.6	\$ 27,934.43	\$ 13,021.31	\$ 3,253.49	\$ 2,279.88	\$ 46,489.11
Thorold.....	Mar., 1914	570.6	2,648.43	67,280.01	1,210.51	7,149.76	78,288.71
Thorndale.....	Mar., 1914	38.8	14,585.91	5,273.92	835.85	6,188.38	26,884.06
Tilbury.....	April, 1915	237.0	35,698.57	23,184.72	5,416.67	12,063.28	76,363.24
Tilsonburg.....	Aug., 1911	446.2	66,582.81	69,038.11	13,765.21	48,286.36	197,672.49
Toronto.....	June, 1911	151,766.0	5,621,573.84	24,399,652.17	1,115,122.44	6,291,763.74	37,428,112.19
Toronto Twp.....	Aug., 1913	480.0	43,683.55	137,959.32	8,693.83	11,650.94	201,987.64
Townsend Twp.....	Dec., 1915	.....	.....	2,526.08	.....	524.34	3,050.42
Vaughan Twp.....	Sept., 1916	.....	.....	10,220.73	377.33	4,292.13	14,890.19
Walkerville.....	Nov., 1914	4,783.4	585,172.33	452,308.32	50.00	339,997.87	1,377,528.52
Wallaceburg.....	Feb., 1915	921.7	127,649.48	96,331.03	28,001.64	64,692.41	316,674.56
Wardsville.....	June, 1921	12.1	6,683.17	6,785.72	1,788.91	370.84	15,628.64
Waterdown.....	Nov., 1911	139.2	19,550.73	17,061.51	5,517.27	8,856.18	50,985.69
Waterford.....	April, 1915	196.8	22,955.40	19,405.07	4,824.61	6,775.24	53,960.32
Waterloo.....	Dec., 1910	1,722.1	135,784.43	200,327.21	.....	66,333.26	402,444.90
Waterloo Twp.....	April, 1913	.....	.....	1,738.88	.....	681.23	2,420.11
Watford.....	Sept., 1917	85.7	27,893.10	18,963.33	2,678.14	8,523.39	58,057.96
Welland.....	Sept., 1917	1,932.8	86,602.28	269,880.22	100.00	149,995.55	506,578.05
Wellesley.....	Nov., 1916	135.7	30,500.51	9,041.43	2,861.18	6,567.47	48,970.59
West Lorne.....	Jan., 1917	209.8	35,283.49	13,391.06	9,921.12	4,870.11	63,465.78
Weston.....	Jan., 1911	1,784.2	146,181.30	111,977.53	1,844.08	52,845.08	312,847.99
Windsor.....	Oct., 1914	10,114.7	1,230,444.60	1,702,970.15	275.00	650,657.11	3,584,346.86
Woodbridge.....	Dec., 1914	237.5	31,079.91	15,599.41	6,160.63	9,597.61	62,437.56
Woodstock.....	Jan., 1911	2,593.0	173,131.97	285,767.93	447.65	99,359.55	558,707.10
Wyoming.....	Nov., 1916	40.4	12,237.57	10,190.12	952.08	4,127.10	27,506.87
York Twp.....	Jan., 1913	.....	.....	.....	.....	.....	.....
Zurich.....	Sept., 1917	53.6	26,019.05	7,138.40	5,766.35	5,156.28	44,080.08
<b>RURAL POWER DISTRICTS</b>							
Aylmer.....	Nov., 1920	6.7	5,349.88	.....	.....	964.33	6,314.21
Baden.....	.....	21.8	12,093.66	.....	.....	1,004.19	13,097.85
Beamsville.....	Jan., 1923	72.4	72,018.31	.....	.....	3,636.12	75,654.43
Belle River.....	Dec., 1922	39.6	28,757.87	.....	.....	2,794.87	31,552.74
Brant.....	Oct., 1914	38.8	19,939.28	.....	.....	3,440.40	23,379.68
Chatham.....	May, 1922	43.8	32,882.22	.....	.....	4,971.57	37,853.79
Chippawa.....	July, 1922	55.3	20,724.85	.....	.....	1,140.63	21,865.48
Delaware.....	Oct., 1921	15.2	27,473.88	.....	.....	1,685.49	29,159.37
Dorchester.....	Dec., 1921	77.1	57,374.89	.....	.....	10,343.00	67,717.89
Drumbo.....	Aug., 1922	16.8	14,655.69	.....	.....	1,873.39	16,529.08
Dundas.....	Jan., 1921	30.0	18,053.52	.....	.....	2,957.63	21,011.15
Exeter.....	Nov., 1922	36.3	22,760.73	.....	.....	2,644.23	25,404.96
Galt.....	Oct., 1922	15.0	5,278.59	.....	.....	542.18	5,820.77
Homer.....	Nov., 1922	.....	3,938.41	.....	.....	559.42	4,497.83
Ingersoll.....	Oct., 1914	2.4	712.81	.....	.....	818.06	1,530.87
Jordan.....	May, 1922	5.0	18,313.29	.....	.....	932.85	19,246.14
London.....	May, 1922	10.5	15,303.03	.....	.....	880.96	16,183.99
Lynden.....	Feb., 1922	10.0	9,402.02	.....	.....	1,234.19	10,636.21
Markham.....	Dec., 1922	18.1	14,977.41	.....	.....	2,542.91	17,520.32
Niagara.....	Jan., 1922	26.9	7,978.37	.....	.....	2,943.59	10,921.96
Petrolia.....	Aug., 1923	.....	2,234.92	.....	.....	71.05	2,305.97
Preston.....	April, 1922	98.5	47,660.28	.....	.....	10,947.15	58,607.43
Ridgetown.....	Mar., 1922	28.7	31,285.24	.....	.....	6,939.18	38,224.42
St. Jacobs.....	Nov., 1922	12.9	7,878.54	.....	.....	885.08	8,763.62
St. Thomas.....	Aug., 1923	5.0	35,877.98	.....	.....	127.69	36,005.67
Saltfleet.....	Feb., 1922	177.1	114,932.03	.....	.....	11,427.36	126,359.39
Sandwich.....	July, 1922	25.6	14,798.19	.....	.....	2,062.20	16,860.39
Sarnia.....	June, 1923	9.2	15,418.47	.....	.....	761.02	16,179.49
Simcoe.....	Nov., 1922	10.3	5,423.85	.....	.....	435.90	5,859.75
Stamford.....	Mar., 1922	29.0	11,773.32	.....	.....	2,482.45	14,255.77

\*Denotes deficit.



PLANT AND RESERVES WITH THE ASSETS, LIABILITIES AND RESERVES  
AS AT DECEMBER 31, 1923—Continued

LIABILITIES				RESERVES AND SURPLUSES			
Municipalities' liability in respect to Hydro-Electric Power Commission's plants	Municipal debenture debt	Accounts payable and other liabilities (municipalities only)	Total liabilities	Debentures paid, sinking fund and other reserves	Plant renewal reserves	Surplus	Total reserves and surpluses
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
27,934.43	15,575.99	7.29	43,517.71	1,055.15	713.42	1,202.83	2,971.40
2,648.43	4,620.66	2,132.47	9,401.56	2,201.71	19,675.51	47,009.93	68,887.15
14,585.91	2,327.41	1,589.01	18,502.33	2,926.66	5,186.38	268.69	8,381.73
35,698.57	11,553.50	889.87	48,141.94	5,339.35	10,376.54	12,505.41	28,221.30
66,582.81	26,774.43	794.94	94,152.18	27,599.43	44,258.91	31,661.97	103,520.31
5,621,573.84	19,389,014.11	2,470,022.56	27,480,610.51	4,004,795.91	4,153,507.64	1,789,198.13	9,947,501.68
43,683.55	72,019.26	6,370.37	122,073.18	10,606.07	31,939.98	37,368.41	79,914.46
.....	2,201.57	.....	2,201.57	848.85	.....	.....	848.85
.....	6,826.82	2,824.37	9,651.19	3,641.17	3,403.62	*1,805.79	5,239.00
585,172.33	259,364.71	127,056.45	971,593.49	116,415.66	173,947.73	115,571.64	405,935.03
127,649.48	63,328.75	6,660.35	197,638.58	20,435.29	41,755.93	56,844.76	119,035.98
6,683.17	7,114.39	1.22	13,798.78	512.29	467.98	849.59	1,829.96
19,550.73	4,079.24	421.88	24,051.85	7,051.53	14,012.70	5,869.61	26,933.84
22,955.40	.....	73.92	23,029.32	9,973.97	7,631.50	13,325.53	30,931.00
135,784.43	89,223.12	10,494.60	235,502.15	43,204.51	72,835.35	50,902.89	166,942.75
.....	.....	1,738.88	1,738.88	681.23	.....	.....	681.23
27,893.10	7,211.91	.....	35,105.01	3,157.48	8,208.11	11,587.36	22,952.95
86,602.28	197,959.99	109,184.77	393,747.04	56,044.79	82,631.44	*25,845.22	112,831.01
30,500.51	5,788.65	.....	36,289.16	3,608.26	6,581.82	2,491.35	12,681.43
35,283.49	7,150.62	1,467.84	43,901.95	2,418.34	4,877.12	12,268.37	19,563.83
146,181.30	36,765.47	10,602.42	193,549.19	29,126.14	46,371.17	43,801.49	119,298.80
1,230,444.60	1,055,834.52	539,143.08	2,825,422.20	222,580.26	250,364.21	285,980.19	759,924.66
31,079.91	7,359.21	999.92	39,439.04	4,102.33	8,539.04	10,357.15	22,998.52
173,131.97	87,385.63	1,937.25	262,454.85	95,017.38	91,206.18	110,028.69	296,252.25
12,237.57	7,478.33	1,483.90	21,199.80	3,078.76	4,026.01	*797.70	6,307.07
.....	.....	.....	.....	.....	.....	.....	.....
26,019.05	5,131.30	.....	31,150.35	1,048.93	5,487.63	6,393.17	12,929.73
.....	.....	.....	.....	.....	.....	.....	.....
5,349.88	.....	1,807.67	7,157.55	572.03	392.30	*1,807.67	*843.34
12,093.66	.....	585.15	12,678.81	510.31	493.88	*585.15	419.04
72,018.31	.....	.....	72,018.31	1,016.06	885.35	1,734.71	3,636.12
28,757.87	.....	.....	28,757.87	470.62	358.30	1,965.95	2,794.87
19,939.28	.....	.....	19,939.28	586.74	693.29	2,160.37	3,440.40
.....	.....	.....	.....	.....	.....	.....	.....
32,882.22	.....	.....	32,882.22	1,046.96	912.58	3,012.03	4,971.57
20,724.85	.....	701.63	21,426.48	574.00	566.63	*701.63	439.00
27,473.88	.....	.....	27,473.88	309.52	285.44	1,090.53	1,685.49
57,374.89	.....	.....	57,374.89	1,693.43	1,598.25	7,051.32	10,343.00
14,655.69	.....	.....	14,655.69	362.44	331.15	1,179.80	1,873.39
.....	.....	.....	.....	.....	.....	.....	.....
18,053.52	.....	.....	18,053.52	794.51	1,177.47	985.65	2,957.63
22,760.73	.....	.....	22,760.73	451.42	366.46	1,826.35	2,644.23
5,278.59	.....	.....	5,278.59	116.15	90.22	335.81	542.18
3,938.41	.....	.....	3,938.41	75.91	72.49	411.02	559.42
712.81	.....	.....	712.81	177.43	365.77	274.86	818.06
.....	.....	.....	.....	.....	.....	.....	.....
18,313.29	.....	.....	18,313.29	263.81	277.89	391.15	932.85
15,303.03	.....	.....	15,303.03	136.78	125.06	619.12	880.96
9,402.02	.....	.....	9,402.02	320.61	281.65	631.93	1,234.19
14,977.41	.....	.....	14,977.41	277.24	260.31	2,005.36	2,542.91
7,978.37	.....	.....	7,978.37	363.25	368.29	2,212.05	2,943.59
.....	.....	.....	.....	.....	.....	.....	.....
2,234.92	.....	.....	2,234.92	13.84	12.55	44.66	71.05
47,660.28	.....	.....	47,660.28	1,965.26	1,747.79	7,234.10	10,947.15
31,285.24	.....	.....	31,285.24	824.32	820.38	5,294.48	6,939.18
7,878.54	.....	.....	7,878.54	154.88	129.71	600.49	885.08
35,877.98	.....	88.18	35,966.16	69.21	58.48	*88.18	39.51
.....	.....	.....	.....	.....	.....	.....	.....
114,932.03	.....	.....	114,932.03	3,443.87	3,556.59	4,426.90	11,427.36
14,798.19	.....	.....	14,798.19	269.83	208.81	1,583.56	2,062.20
15,418.47	.....	.....	15,418.47	94.52	77.85	588.65	761.02
5,423.85	.....	.....	5,423.85	107.53	82.19	246.18	435.90
11,773.32	.....	.....	11,773.32	410.62	402.15	1,669.68	2,482.45

**STATEMENT COMBINING THE HYDRO-ELECTRIC POWER COMMISSION'S  
OF THE HYDRO MUNICIPAL UTILITIES,**

**ASSETS**

Municipality	Date commenced operation	Average electrical horsepower taken during the year 1923	Hydro-Electric Power Commission's plant (See preceding explanatory statement under heading "Assets," Column 3)	Plant value within the boundaries of the municipalities	Bank balances and investments in securities (municipalities only)	Accounts receivable, inventories and other assets	Total assets, or municipalities' investments
<b>NIAGARA</b>							
Streetsville.....	Nov., 1922	.3	\$ c. 1,194.51	\$ c. .....	\$ c. .....	\$ c. 183.92	\$ c. 1,378.43
Tavistock.....	April, 1923	8.7	8,443.09	.....	.....	774.30	9,217.39
Wallaceburg.....	Jan., 1923	12.6	18,656.54	.....	.....	2,751.05	21,407.59
Waterdown.....	Oct., 1922	7.4	5,437.68	.....	.....	542.11	5,979.79
Welland.....	April, 1922	8.0	4,459.35	.....	.....	1,051.65	5,511.00
Woodbridge.....	Jan., 1923	.....	3,461.27	.....	.....	98.10	3,559.37
Woodstock.....	Feb., 1913	96.3	67,205.02	.....	.....	11,915.77	79,120.79
Totals—Municipalities.....			19,653,193.77	41,451,060.89	1,739,492.27	13,301,460.52	76,145,207.45
Rural Districts not included in above.....			266,839.55	.....	.....	41,812.64	308,652.19
Essex County system.....			.....	395,432.06	.....	20,690.35	416,122.41
Companies and Government Industries.....			3,470,473.40	.....	.....	939,217.91	4,409,691.31
						14,303,181.42	81,279,673.36
Less renewals expense and adjustments.....			.....	.....	.....	295,019.76	295,019.76
Totals—Municipalities, Rural Districts and Companies.....			23,390,506.72	41,846,492.95	1,739,492.27	14,008,161.66	80,984,653.60
Power development plants at Niagara Falls including the transformer stations and transmission lines of the Ontario Power Company and Toronto Power Company.....			115,033,440.33	.....	.....	2,175,274.31	117,208,714.64
Totals of Niagara System revenue-producing properties in operation as at 31st December, 1923.....			138,423,947.05	41,846,492.95	1,739,492.27	16,183,435.97	198,193,368.24
PLANTS UNDER CONSTRUCTION— Power development, transformer stations, transmission lines and additions and extensions to the system to serve municipal and rural service.....			4,000,426.31	.....	.....	.....	4,000,426.31
Grand totals of all properties connected with Niagara system in service and under construction.....			142,424,373.36	41,846,492.95	1,739,492.27	16,183,435.97	202,193,794.55
TOTAL ASSETS.....			.....	.....	.....	.....	202,193,794.55

\*Denotes deficit.

PLANT AND RESERVES WITH THE ASSETS, LIABILITIES AND RESERVES  
AS AT DECEMBER 31, 1923—Continued

LIABILITIES				RESERVES AND SURPLUSES			
Municipalities' liability in respect to Hydro-Electric Power Commission's plants	Municipal debenture debt	Accounts payable and other liabilities (municipalities only)	Total liabilities	Debentures paid, sinking fund and other reserves	Plant renewal reserves	Surplus	Total reserves and surpluses

SYSTEM

\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
1,194.51			1,194.51	20.40	21.86	141.66	183.92
8,443.09			8,443.09	116.65	98.16	559.49	774.30
18,656.54			18,656.54	154.68	134.08	2,462.29	2,751.05
5,437.68			5,437.68	106.15	97.97	337.99	542.11
4,459.35			4,459.35	143.24	131.02	777.39	1,051.65
3,461.27			3,461.27	45.95	51.06	1.09	98.10
67,205.02			67,205.02	1,903.84	2,493.40	7,518.53	11,915.77
19,653,193.77	28,960,618.88	5,220,680.52	53,834,493.17	8,063,518.67	8,821,014.75	5,426,180.86	22,310,714.28
266,839.55			266,839.55	41,812.64			41,812.64
	297,748.01	2,577.46	300,325.47	36,879.19	56,727.82	22,189.93	115,796.94
3,470,473.40		20,042.62	3,490,516.02	438,740.66	494,512.36	*14,077.73	919,175.29
	Less Renew	als Expense a	nd Adjustme	nts	9,372,254.93		23,387,499.15
					295,019.76		295,019.76
23,390,506.72	29,258,366.89	5,243,300.60	57,892,174.21	8,580,951.16	9,077,235.17	5,434,293.06	23,092,479.39
112,996,800.70		1,240,783.41	114237584.11	658,558.35	2,076,918.68	235,653.50	2,971,130.53
136,387,307.42	29,258,366.89	6,484,084.01	172129758.32	9,239,509.51	11,154,153.85	5,669,946.56	26,063,609.92
4,000,426.31			4,000,426.31				
140,387,733.73	29,258,366.89	6,484,084.01	176130184.63	9,239,509.51	11,154,153.85	5,669,946.56	26,063,609.92
TOTAL LIABILITIES, RESERVES AND SURPLUSES							202193794.55



**STATEMENT COMBINING THE HYDRO-ELECTRIC POWER COMMISSION'S  
OF THE HYDRO MUNICIPAL UTILITIES,**

**ASSETS**

Municipality	Date commenced operation	Average electrical horsepower taken during the year 1923	Hydro-Elec- tric Power Commission's plant (See preceding explanatory statement under heading "Assets" Column 3)	Plant value with- in the boundaries of the municipali- ties	Bank balances and invest- ments in securities (municipal- ities only)	Accounts receivable, inventories and other assets	Total assets or municipali- ties' investments
<b>SEVERN</b>							
Alliston.....	June, 1918	126.0	\$ 70,588.78	\$ 43,408.04	\$ 3,957.65	\$ 7,570.22	125,524.69
Barrie.....	April, 1913	1,086.5	191,651.25	144,616.20	57,361.75	47,487.10	441,116.30
Beeton.....	Aug., 1918	79.1	55,928.37	16,168.59	34.27	5,690.77	77,822.00
Bradford.....	Oct., 1918	69.9	56,650.67	20,707.86	1,437.89	4,819.92	83,616.34
Coldwater.....	Mar., 1913	89.8	20,947.97	11,999.40	3,947.65	6,976.42	43,871.44
Collingwood.....	Mar., 1913	1,353.9	291,213.97	104,807.87	21,745.37	96,104.71	513,871.92
Cookstown.....	May, 1918	35.7	16,128.31	14,042.93	2,125.25	2,354.47	34,650.96
Creemore.....	Nov., 1914	65.5	26,149.69	11,676.31	7,979.12	6,360.67	52,165.79
Elmvale.....	June, 1913	168.8	30,065.10	12,280.35	5,750.66	7,446.79	55,542.90
Midland.....	July, 1911	2,433.3	372,825.77	170,937.91	23,945.44	78,117.70	645,826.82
Penetang.....	July, 1911	688.7	119,252.25	71,845.74	15,694.17	42,146.50	248,938.66
Port McNicoll....	Jan., 1915	47.6	8,642.08	8,897.25	690.38	1,912.13	20,141.84
Stayner.....	Oct., 1913	121.9	27,550.25	20,561.96	6,799.56	7,655.20	62,566.97
Thornton.....	Nov., 1918	14.3	11,437.53	7,575.91	323.92	798.68	20,136.04
Tottenham.....	Oct., 1918	39.5	37,450.69	12,826.43	1,050.08	2,802.22	54,129.42
Victoria Harbor...	July, 1914	47.1	12,085.38	8,810.40	4,162.35	3,060.02	28,118.15
Waubashene.....	Dec., 1914	25.9	6,131.09	5,325.09	2,541.49	1,365.61	15,363.28
<b>RURAL POWER DISTRICTS</b>							
Barrie.....		4.4	5,356.82			79.23	5,436.05
Nottawasaga.....		12.5	13,263.84			1,547.78	14,811.62
Stayner.....		6.0	17,436.02			192.96	17,628.98
Companies and Government Industries... Plant under construction for municipal service.....			176,383.88			46,372.00	222,755.88
			12,123.81				12,123.81
Less renewals, expenses and adjustments..						370,861.10 7,934.54	2,796,159.86 7,934.54
Totals—Municipalities, Rural Districts and Companies.....			1,579,263.52	686,488.24	159,547.00	362,926.56	2,788,225.32

TOTAL ASSETS..... 2,788,225.32

\*Denotes deficit.

PLANT AND RESERVES WITH THE ASSETS, LIABILITIES AND RESERVES  
AS AT DECEMBER 31, 1923—Continued

LIABILITIES				RESERVES AND SURPLUSES			
Municipalities' liability in respect to Hydro-Electric Power Commission's plants	Municipal debenture debt	Accounts payable and other liabilities (municipalities only)	Total liabilities	Debentures paid sinking fund and other reserves	Plant renewal reserves	Surplus	Total reserves and surpluses

SYSTEM

\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
70,588.78	36,583.49	4,026.93	111,199.20	3,416.51	11,399.87	*490.89	14,325.49
191,651.25	26,311.39	3,900.20	221,862.84	71,417.15	49,734.64	98,101.67	219,253.46
55,928.37	13,752.47	2,168.34	71,849.18	1,247.53	7,114.16	*2,388.87	5,972.82
56,650.67	18,073.83	7,703.10	82,427.60	1,126.17	6,938.19	*6,875.62	1,188.74
20,947.97	5,755.70	400.00	27,103.67	2,642.70	6,735.89	7,389.18	16,767.77
291,213.97	17,519.71	5,354.94	314,088.62	48,698.78	69,919.92	81,164.60	199,783.30
16,128.31	12,418.50	628.11	29,174.92	1,081.50	3,982.10	412.44	5,476.04
26,149.69	4,469.58	39.00	30,658.27	3,695.16	5,995.65	11,816.71	21,507.52
30,065.10	5,503.16	.....	35,568.26	3,750.22	7,637.13	8,587.29	19,974.64
372,825.77	77,769.28	222.98	450,818.03	54,222.68	66,667.86	74,118.25	195,008.79
119,252.25	31,403.40	.....	150,655.65	25,716.87	39,224.43	33,341.71	98,283.01
8,642.08	5,832.38	283.08	14,757.54	1,990.93	2,706.01	687.36	5,384.30
27,550.25	9,634.67	.....	37,184.92	6,692.38	8,555.28	10,134.39	25,382.05
11,437.53	6,705.34	2,286.02	20,428.89	794.66	2,056.68	*3,144.19	*292.85
37,450.69	8,085.59	5,937.74	51,474.02	2,381.51	4,091.23	*3,817.34	2,655.40
12,085.38	4,687.79	.....	16,773.17	2,599.20	3,826.02	4,919.76	11,344.98
6,131.09	2,558.29	226.66	8,916.04	1,347.43	1,853.17	3,246.64	6,447.24
5,356.82	.....	17.91	5,374.73	33.74	45.49	*17.91	61.32
13,263.84	.....	.....	13,263.84	480.33	822.17	245.28	1,547.78
17,436.02	.....	32.31	17,468.33	95.64	97.32	*32.31	160.65
176,383.88	.....	.....	176,383.88	25,333.52	21,038.48	.....	46,372.00
12,123.81	.....	.....	12,123.81	.....	.....	.....	.....
.....	.....	.....	.....	.....	320,441.69	.....	896,604.45
.....	.....	.....	.....	.....	7,934.54	.....	7,934.54
1,579,263.52	287,064.57	33,227.32	1,899,555.41	258,764.61	312,507.15	317,398.15	888,669.91
.....	.....	.....	.....	Liabilities	.....	.....	1,899,555.41

TOTAL LIABILITIES, RESERVES AND SURPLUSES. . . . . 2,788,225.32

# STATEMENT COMBINING THE HYDRO-ELECTRIC POWER COMMISSION'S OF THE HYDRO MUNICIPAL UTILITIES,

## ASSETS

Municipality	Date commenced operation	Average electrical horsepower taken during the year 1923	Hydro-Electric Power Commission's plant (See preceding explanatory statement under heading "Assets" Column 3)	Plant value within the boundaries of the municipalities	Bank balances and investments in securities (municipalities only)	Accounts receivable, inventories and other assets	Total assets or municipalities investments
EUGENIA							
Arthur.....	Dec., 1916	94.1	\$ c. 65,616.34	\$ c. 24,074.22	\$ c. 244.04	\$ c. 10,542.44	\$ c. 100,477.04
Carlsruhe and Neustadt.....	Dec., 1918	152.8	60,991.75	18,551.46	34.63	5,149.24	84,727.08
Chatsworth.....	Dec., 1915	34.1	11,406.55	6,023.75	758.25	3,846.02	22,034.57
Chesley.....	July, 1916	272.5	99,194.63	36,810.35	64.38	15,976.42	152,045.78
Derby Twp.....				210.46			210.46
Dundalk.....	Dec., 1915	111.5	30,401.39	10,228.73	3,013.02	5,810.90	49,454.04
Durham.....	Dec., 1915	372.5	92,567.51	29,108.83	10,918.53	12,056.51	144,651.38
Elmwood.....	April, 1918	34.4	13,474.78	7,486.73	530.08	1,841.54	23,333.13
Flesherton.....	Dec., 1915	43.7	15,238.02	7,105.45	1,129.46	3,175.10	26,648.03
Grand Valley.....	Dec., 1916	70.7	37,095.28	12,922.64	5,356.58	4,422.55	59,797.05
Hanover.....	Sept., 1916	1,322.4	347,916.46	91,113.08	21,730.93	37,950.86	498,711.33
Holstein.....	May, 1916	10.7	12,028.35	3,146.90	378.55	2,293.69	17,847.49
Hornings Mills.....		5.0	10,856.77			448.64	11,305.41
Kincardine.....	Mar., 1921	188.9	120,711.19	63,774.59	470.42	9,807.38	194,763.58
Lucknow.....	Jan., 1921	77.8	53,304.04	21,893.11	1,479.90	1,959.54	78,636.59
Markdale.....	Mar., 1916	92.6	23,347.19	15,515.30	998.00	4,673.77	44,534.26
Mount Forest.....	Dec., 1915	188.3	73,446.31	37,679.49	7,343.43	15,070.79	133,540.02
Orangeville.....	July, 1916	212.7	94,763.79	42,168.58	1,160.72	11,877.65	149,970.74
Owen Sound.....	Dec., 1915	1,633.7	418,086.54	227,408.31		169,578.06	815,072.91
Paisley.....		9.7	15,563.21	15,719.78		1,011.90	32,294.89
Priceville.....	Mar., 1921	10.2	6,508.91	6,517.58	108.20	547.43	13,682.12
Ripley.....	Jan., 1921	60.7	45,719.43	13,894.75	554.33	1,752.97	61,921.48
Shelburne.....	July, 1916	159.1	52,959.22	25,111.49	396.57	9,530.73	87,998.01
Tara.....	Feb., 1918	40.7	40,471.84	15,492.70	825.03	3,627.48	60,417.05
Teeswater.....	Dec., 1920	129.4	58,672.85	27,081.63	3.18	4,936.99	90,694.65
Wingham.....	Dec., 1920	312.7	117,538.13	97,887.50	5,814.76	12,976.74	294,217.13
RURAL POWER DISTRICTS							
Flesherton.....		1.0	2,394.70			189.15	2,583.85
Walkerton Quarry.....		1.0	1,768.33			171.85	1,940.18
Other Rural Districts.....			3,241.66			256.21	3,497.87
Companies.....			80,282.72			30,442.34	110,725.06
Plant under construction.....			38,348.31				38,348.31
Less renewals, expenses and adjustments.....						381,924.89 3,779.31	3,406,081.49 3,779.31
Totals—Municipalities, Rural Districts and Companies.....			2,103,916.20	856,927.41	63,312.99	378,145.58	3,402,302.18

TOTAL ASSETS..... 3,402,302.18

\* Denotes deficit.



PLANT AND RESERVES WITH THE ASSETS, LIABILITIES AND RESERVES  
AS AT DECEMBER 31, 1923—Continued

LIABILITIES				RESERVES AND SURPLUSES			
Municipalities' liability in respect to Hydro-Electric Power Commission's plants	Municipal debenture debt	Accounts payable and other liabilities (municipalities only)	Total liabilities	Debentures paid sinking fund and other reserves	Plant renewal reserves	Surplus	Total reserves and surpluses

SYSTEM

\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
65,616.34	19,075.44	12,826.15	97,517.93	5,064.53	12,428.76	*14,534.18	2,959.11
60,991.75	14,642.56	5,146.55	80,780.86	2,357.44	5,875.91	*4,287.13	3,946.22
11,406.55	5,233.46	383.00	17,023.01	2,066.95	2,623.58	321.03	5,011.56
99,194.63	20,317.11		119,511.74	10,844.51	15,358.62	6,330.91	32,534.04
		210.46	210.46				
30,401.39	3,607.66	120.00	34,129.05	4,380.71	5,564.45	5,379.83	15,324.99
92,567.51	19,942.27	735.33	113,245.11	10,267.62	10,083.14	11,055.51	31,406.27
13,474.78	5,948.84	502.52	19,926.14	1,425.88	2,396.16	*415.05	3,406.99
15,238.02	5,802.30	927.70	21,968.02	1,818.35	3,560.77	*699.11	4,680.01
37,095.28	8,489.99	1,091.19	46,676.46	3,797.00	5,569.31	3,754.28	13,120.59
347,916.46	75,120.32	6,757.23	429,794.01	24,712.35	33,202.59	11,002.38	68,917.32
12,028.35	1,925.64	4,963.71	18,917.70	1,282.74	1,865.39	*4,218.34	*1,070.21
10,856.77			10,856.77		448.64		448.64
120,711.19	60,164.64	10,085.51	190,961.34	7,657.72	5,656.65	*9,512.13	3,802.24
53,304.04	18,388.80	1,095.37	72,788.21	1,334.56	2,638.19	1,875.63	5,848.38
23,347.19	7,873.61		31,220.80	2,024.57	5,702.45	5,586.44	13,313.46
73,446.31	21,461.96	6,135.67	101,043.94	13,821.31	16,376.89	2,297.88	32,496.08
94,763.79	27,331.74	5,536.22	127,631.75	11,792.48	15,497.34	*4,950.83	22,338.99
418,086.54	105,000.00	12,745.25	535,831.79	139,481.43	78,676.02	61,083.67	279,241.12
15,563.21	15,978.53	547.67	32,089.41		68.34	137.14	205.48
6,508.91	6,382.80	818.09	13,709.80	617.20	460.18	*1,105.06	*27.68
45,719.43	13,367.90	1,054.65	60,141.98	604.04	2,201.73	*1,026.27	1,779.50
52,959.22	14,979.34	121.97	68,060.53	7,108.36	9,932.61	2,896.51	19,937.48
40,471.84	12,994.96	4,846.51	58,313.31	2,505.04	5,610.07	*6,011.37	2,103.74
58,672.85	26,829.89	994.49	86,497.23	3,876.91	2,381.90	*2,061.39	4,197.42
177,538.13	69,218.40	5,353.17	252,109.70	26,887.10	12,501.19	2,719.14	42,107.43
2,394.70		110.13	2,504.83	73.99	115.16	*110.13	78.02
1,768.33			1,768.33	58.40	90.73	22.72	171.85
3,241.66			3,241.66	256.21			256.21
80,282.72			80,282.72	4,111.39	26,330.95		30,442.34
38,348.31			38,348.31				
					283,217.72		638,978.59
	Less Renew	als Expense a	nd Adjustme	nts.....	3,779.31		3,779.31
2,103,916.20	580,078.16	83,108.54	2,767,102.90	290,228.79	279,438.41	65,532.08	635,199.28
				Liabilities..			2,767,102.90

STATEMENT COMBINING THE HYDRO-ELECTRIC POWER COMMISSION'S  
OF THE HYDRO MUNICIPAL UTILITIES,

ASSETS							
Municipality	Date commenced operation	Average electrical horsepower taken during the year 1923	Hydro-Electric Power Commission's plant (See preceding explanatory statement under heading "Assets" Column 3)	Plant value within the boundaries of the municipalities	Bank balances and investment in securities (municipalities only)	Accounts receivable, inventories and other assets	Total assets or municipal palities investments
WASDELLS							
Beaverton.....	Nov., 1914	136.6	\$ c. 41,805.88	\$ c. 21,629.21	\$ c. 5,844.04	\$ c. 11,011.68	\$ c. 80,290.81
Brechin.....	Jan., 1915	38.3	16,595.04	3,534.13	699.96	5,132.76	25,961.89
Brock Twp.....				2,600.00			2,600.00
Cannington.....	Nov., 1914	93.9	31,906.59	18,307.72	406.24	9,886.32	60,506.87
Kirkfield.....	June, 1920	27.8	13,627.57	6,540.66	65.98	1,147.23	21,381.44
Port Perry.....	Sept., 1922	80.8	49,485.59	19,385.85	3,678.95	2,445.32	74,995.71
Sunderland.....	Nov., 1914	48.0	25,413.56	8,412.37	1,768.06	6,108.01	41,702.00
Uxbridge.....	Sept., 1922	81.0	52,455.51	16,418.72	3,000.00	2,831.67	74,705.90
Woodville.....	Nov., 1914	66.3	29,913.78	6,990.96	1,337.28	7,521.70	45,803.72
RURAL POWER DISTRICTS							
Mariposa.....		3.2	22,414.55			186.19	22,600.74
Port Perry.....		2.1	1,680.94			162.92	1,843.86
Rural districts not included in above.....			14,990.82			1,185.91	16,176.73
Companies not included in above.....			96,928.75			31,711.40	128,640.15
Less renewals, expenses and adjustments ..						79,331.11	597,209.82
						2,468.01	2,468.01
Totals—Municipalities, Rural Districts and Companies...		578.0	397,218.58	103,819.62	16,840.51	76,863.10	594,741.81
TOTAL ASSETS.....							\$594,741.81

\*Denotes deficit.

MUSKOKA

		\$	c.	\$	c.	\$	c.	\$	c.	\$	c.
Gravenhurst.....	Nov., 1915	463.		45,319.95		69,481.61		1,648.17		16,720.35	
Huntsville.....	Sept., 1916	928.8		167,494.37		28,457.46		9,635.76		24,878.21	
Companies not included in the above.....				284.01						34.00	
Plant under construction for municipal service.....				2,025.09							
										41,632.56	
Less renewals, expenses and adjustments .....										1,411.28	
Totals—Municipalities and Companies .....		1,391.8		215,123.42		97,939.07		11,283.93		40,221.28	
TOTAL ASSETS.....											\$364,567.70

\*Denotes deficit.

### PLANT AND RESERVES WITH THE ASSETS, LIABILITIES AND RESERVES AS AT DECEMBER 31, 1923—Continued

LIABILITIES				RESERVES AND SURPLUSES			
Municipalities' liability in respect to Hydro-Electric Power Commission's plants	Municipal debenture debt	Accounts payable and other liabilities (municipalities only)	Total liabilities	Debentures paid sinking fund and other reserves	Plant renewal reserves	Surplus	Total reserves and surpluses

## SYSTEM

\$	c.	\$	c.	\$	c.	\$	c.	\$	c.	\$	c.	\$	c.
41,805.88		12,506.85		200.00		54,512.73		5,239.82		8,637.36		11,900.90	
16,595.04		2,938.71		3,342.38		22,876.13		1,955.27		4,018.70		*2,888.21	
		2,276.18				2,276.18		323.82					
31,906.59		12,778.45				44,685.04		4,533.36		8,530.02		2,758.45	
13,627.57		5,480.75		666.12		19,774.44		519.25		1,098.04		*10.29	
49,485.59		20,000.00				69,485.59				1,191.15		4,318.97	
25,413.56		5,525.73		2,966.01		33,905.30		3,354.95		5,540.65		*1,098.90	
52,455.51		16,207.59		51.47		68,714.57				1,174.25		4,817.08	
29,913.78		4,647.29		986.39		35,547.46		3,041.82		5,435.64		1,778.80	
22,414.55				27.96		22,442.51		75.03		111.16		*27.96	
1,680.94						1,680.94		28.23		26.16		108.53	
14,990.82						14,990.82		1,185.91					
96,928.75						96,928.75		11,200.31		20,511.09			
										56,274.22			
										2,468.01			
397,218.58		82,361.55		8,240.33		487,820.46		31,457.77		53,806.21		21,657.37	
								Liabilities					487,820.46

TOTAL LIABILITIES, RESERVES AND SURPLUSES.....	594,741.81
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## SYSTEM

\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
45,319.95	34,207.50	4,131.68	83,659.13	35,558.55	16,084.61	*2,132.21	49,510.95
167,494.37	14,685.77	1,551.23	183,731.37	12,797.05	20,888.79	13,048.59	46,734.43
284.01	.....	.....	284.01	10.45	23.55	.....	34.00
2,025.09	.....	.....	2,025.09	.....	.....	.....	.....
	Less Renewals, Expenses and Adjustments.....				36,996.95		96,279.38
					1,411.28		1,411.28
215,123.42	48,893.27	5,682.91	269,699.60	48,366.05	35,585.67	10,916.38	94,868.10
				Liabilities ..	.....	.....	269,699.60

TOTAL LIABILITIES, RESERVES AND SURPLUSES.....	364,567.70
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**STATEMENT COMBINING THE HYDRO-ELECTRIC POWER COMMISSION'S  
OF THE HYDRO MUNICIPAL UTILITIES,**

ASSETS							
Municipality	Date commenced operation	Average electrical horsepower taken during the year 1923	Hydro-Electric Power Commission's plant (See preceding explanatory statement under heading, "Assets", Column 3)	Plant value within the boundaries of the municipalities	Bank balances and investments in securities (municipalities only)	Accounts receivable, inventories and other assets	Total assets or municipalities' investments
ST. LAWRENCE							
Alexandria.....	Jan., 1921	207.6	\$ 113,433.77	\$ 45,742.03	\$ 561.17	\$ 8,938.72	\$ 168,675.69
Apple Hill.....	April, 1921	22.3	9,599.20	5,959.11	5.02	1,400.29	16,963.62
Brockville.....	April, 1915	1,306.2	225,733.80	218,826.51	28,212.40	149,041.63	621,814.34
Chesterville.....	April, 1914	169.7	61,357.74	12,215.18	437.67	20,319.12	94,329.71
Lancaster.....	May, 1921	24.2	37,699.31	9,855.04	88.46	2,242.37	49,885.18
Martintown.....	May, 1921	13.1	5,378.34	4,775.18	1,192.88	293.29	11,639.69
Maxville.....	Feb., 1921	50.	40,538.71	18,941.26	.....	2,487.45	61,967.42
Prescott.....	Dec., 1913	254.1	46,532.44	63,963.20	8,384.00	26,599.68	145,479.32
Williamsburg.....	April, 1915	21.9	7,274.22	2,634.46	719.59	2,169.07	12,797.34
Winchester.....	Jan., 1914	100.3	29,490.74	14,141.24	8,050.04	13,167.80	64,849.82
RURAL POWER DISTRICTS.							
Brockville.....	July, 1922	31.5	16,063.16	.....	.....	870.47	16,933.63
Chesterville.....	May, 1922	3.3	3,660.92	.....	.....	212.44	3,873.36
Martintown.....	Jan., 1922	6.9	11,114.16	.....	.....	516.76	11,630.92
Prescott.....	June, 1922	28.	20,929.47	.....	.....	927.15	21,856.62
Companies not included in above		4,393.0	416,695.89	.....	.....	34,340.11	451,036.00
Plant under construction.....		.....	122.63	.....	.....	.....	122.63
Less renewals, expenses and adjustments		.....	.....	.....	.....	263,526.35 5,993.77	1,753,855.29 5,993.77
Totals—Municipalities, Rural Districts and Companies.....		6,632.1	1,045,624.50	397,053.21	47,651.23	257,532.58	1,747,861.52
TOTAL ASSETS.....							\$1,747,861.52
RIDEAU							
Carleton Place....	May, 1919	796.9	\$ 320,585.51	\$ 67,295.75	\$ 10,430.47	\$ 18,348.76	\$ 416,660.49
Kemptville.....	Sept., 1921	94.9	50,899.50	28,848.54	8,243.99	3,166.00	91,158.03
Lanark.....	Sept., 1921	32.5	22,253.56	7,312.16	1,851.07	772.36	32,189.15
Perth.....	Feb., 1919	562.5	215,774.12	108,819.37	.....	57,204.62	381,798.11
Smiths Falls.....	Sept., 1918	941.0	322,432.98	200,036.46	13,792.69	18,061.37	554,323.50
Companies not included in above.....		.....	150,330.86	.....	.....	3,708.60	154,039.46
Plant under construction for municipal service.....		.....	802.68	.....	.....	.....	802.68
Less renewals, expenses and adjustments		.....	.....	.....	.....	101,261.71 5,037.01	1,630,971.42 5,037.01
Totals—Municipalities and Companies.....		2,427.8	1,083,079.21	412,312.28	34,318.22	96,224.70	1,625,934.41
TOTAL ASSETS.....							\$1,625,934.41

\*Denotes deficit.



**STATEMENT COMBINING THE HYDRO-ELECTRIC POWER COMMISSION'S  
OF THE HYDRO MUNICIPAL UTILITIES,**

**ASSETS**

Municipality	Date commenced operation	Average electrical horsepower taken during the year 1923	Hydro-Elec- tric Power Commission's plant (See preceding explanatory statement under heading "Assets", Column 3)	Plant value with- in the boundaries of the municipali- ties	Bank balances and invest- ments in securities (municipal- ities only)	Accounts receivable, inventories and other assets	Total assets or municipali- ties' investments
<b>TRENT</b>							
Bloomfield . . .	April, 1919	60.9	\$ 33,871.62	\$ 11,637.30	\$ 566.03	\$ 2,810.64	\$ 48,885.59
Havelock . . .	Feb., 1921	68.8	31,866.46	33,512.04	1,015.32	2,065.85	68,459.67
Lakefield . . .	Aug., 1920	108.8	46,921.95	32,871.56	7,851.91	7,551.91	90,197.03
Marmora . . .	Jan., 1921	44.7	15,129.64	19,181.46	3,026.63	1,173.41	38,511.14
Norwood . . .	Feb., 1921	87.2	23,833.45	38,334.70	2,989.16	959.09	66,116.40
Peterborough .	Mar., 1916	4,738.9	949,699.36	449,187.50	.....	136,643.58	1,535,530.44
Picton . . .	April, 1919	364.8	167,404.57	50,360.89	18,890.42	30,606.28	267,262.16
Warkworth . . .	Oct., 1923	2.2	7,289.02	9,891.99	588.66	9.81	17,779.48
Wellington . . .	April, 1919	77.9	32,962.61	20,620.21	571.08	3,344.58	57,498.48
Whitby . . .	Mar., 1916	583.1	129,383.16	63,859.25	2,575.87	9,994.59	205,812.87
<b>RURAL DISTRICTS</b>							
Oshawa . . .	April, 1918	83.9	35,406.94	18,876.58	.....	12,038.78	66,322.30
Kingston . . .	Jan., 1923	14.3	19,786.76	.....	.....	781.82	20,568.58
Less renewals, expenses and adjustments . . . . .			.....	.....	.....	207,980.34 5,390.13	2,482,944.14 5,390.13
Totals—Municipalities and Rural Districts . . . . .		6,235.5	1,493,555.54	748,333.48	33,074.78	202,590.21	2,477,554.01
<b>TOTAL ASSETS . . . . .</b>							<b>\$2,477,554.01</b>

\*Denotes deficit.

**RECAPITULATION OF TOTALS OF ABOVE STATEMENTS**

	\$	\$	\$	\$	\$
	c.	c.	c.	c.	c.
Niagara system . . . . .	142,424,373.36	41,846,492.95	1,739,492.27	16,183,435.97	202,193,794.55
Severn system . . . . .	1,579,263.52	686,488.24	159,547.00	362,926.56	2,788,225.32
Eugenia system . . . . .	2,103,916.20	856,927.41	63,312.99	378,145.58	3,402,302.18
Wasdells system . . . . .	397,218.58	103,819.62	16,840.51	76,863.10	594,741.81
Muskoka system . . . . .	215,123.42	97,939.07	11,283.93	40,221.28	364,567.70
St. Lawrence system . . . . .	1,045,624.50	397,053.21	47,651.23	257,532.58	1,747,861.52
Rideau system . . . . .	1,083,079.21	412,312.28	34,318.22	96,224.70	1,625,934.41
Trent system . . . . .	1,493,555.54	748,333.48	33,074.78	202,590.21	2,477,554.01
Thunder Bay system (Port Arthur) . . . . .	6,864,225.62	902,940.44	282,669.22	213,822.74	8,263,658.02
Ottawa system (Ottawa city and Nepean rural power district) . . . . .	26,040.09	1,640,170.78	1,733.79	361,348.71	2,029,293.37
Totals—All systems . . . . .	157,232,420.04	47,692,477.48	2,389,923.94	18,173,111.43	225,487,932.89



PLANT AND RESERVES WITH THE ASSETS, LIABILITIES AND RESERVES  
AS AT DECEMBER 31, 1923—Continued

LIABILITIES				RESERVES AND SURPLUSES			
Municipalities' liability in respect to Hydro-Electric Power Commission's plants	Municipal debenture debt	Accounts payable and other liabilities (municipalities only)	Total liabilities	Debentures paid, sinking fund and other reserves	Plant renewal reserves	Surplus	Total reserves and surpluses
SYSTEM							
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
33,871.62	10,352.64	125.65	44,349.91	847.36	3,480.39	207.93	4,535.68
31,866.46	30,290.12		62,156.58	2,609.88	2,201.28	1,491.93	6,303.09
46,921.95	32,259.21		79,181.16	1,240.79	4,166.54	5,608.54	11,015.87
15,129.64	15,838.57	203.55	31,171.76	1,827.54	1,051.45	4,460.39	7,339.38
23,833.45	35,767.09	157.00	59,757.54	1,332.91	1,878.61	3,147.34	6,358.86
949,699.36	330,000.00	37,931.56	1,317,630.92	46,034.47	97,405.51	74,459.54	217,899.52
167,404.57	3,074.30		170,478.87	2,656.02	15,541.37	78,585.90	96,783.29
7,289.02		10,532.33	17,821.35		9.81	*51.68	*41.87
32,962.61	15,968.48	107.16	49,038.25	1,031.52	4,728.73	2,699.98	8,460.23
129,383.16	39,642.01	4,810.02	173,835.19	16,970.49	8,701.22	6,305.97	31,977.68
35,406.94	14,818.13	8,511.78	58,736.85	2,681.87	12,038.78	*7,135.20	7,585.45
19,786.76			19,786.76		366.66	415.16	781.82
					151,570.35		398,999.00
	Less renewals, expenses and adjustments				5,390.13		5,390.13
1,493,555.54	528,010.55	62,379.05	2,083,945.14	77,232.85	146,180.22	170,195.80	393,608.87
				Liabilities			2,083,945.14
TOTAL LIABILITIES, RESERVES AND SURPLUSES							2,477,554.01

OF ASSETS, LIABILITIES, RESERVES AND SURPLUSES

\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
140,387,733.73	29,258,366.89	6,484,084.01	176,130,184.63	9,239,509.51	11,154,153.85	5,669,946.56	26,063,609.92
1,579,263.52	287,064.57	33,227.32	1,899,555.41	258,764.61	312,507.15	317,398.15	888,669.91
2,103,916.20	580,078.16	83,108.54	2,767,102.90	290,228.79	279,438.41	65,532.08	635,199.28
397,218.58	82,361.55	8,240.33	487,820.46	31,457.77	53,806.21	21,657.37	106,921.35
215,123.42	48,893.27	5,682.91	269,699.60	48,366.05	35,585.67	10,916.38	94,868.10
1,045,624.50	261,102.37	23,992.68	1,330,719.55	203,068.90	131,871.81	82,201.26	417,141.97
1,083,079.21	361,710.71	17,198.21	1,461,988.13	42,875.76	87,169.14	33,901.38	163,946.28
1,493,555.54	528,010.55	62,379.05	2,083,945.14	77,232.85	146,180.22	170,195.80	393,608.87
6,864,225.62	446,862.40	118,057.33	7,429,145.35	328,249.11	148,556.74	357,706.82	834,512.67
26,040.09	976,134.49	66,937.69	1,069,112.27	286,328.75	456,154.56	217,697.79	960,181.10
155,195,780.41	32,830,584.96	6,902,908.07	194,929,273.44	10,806,082.10	12,805,423.76	6,947,153.59	30,558,659.45

TOTAL LIABILITIES, RESERVES AND SURPLUSES

Niagara system	\$ c.
Severn system	202,193,794.55
Eugenia system	2,788,225.32
Wasdells system	3,402,302.18
Muskoka system	594,741.81
St. Lawrence system	364,567.70
Rideau system	1,747,861.52
Trent system	1,625,934.41
Thunder Bay system (Port Arthur)	2,477,554.01
Ottawa system (Ottawa city and Nepean rural power district)	8,263,658.02
Totals—All systems	2,029,293.37
	225,487,932.89

# STATEMENT

## Condensed Operating Reports of Electrical Departments

### NIAGARA

Municipality	Popu- lation	Cost of power purchased	Cost of operation and main- tenance	Debenture charges and interest	Total cost of operation	Revenue	Gross surplus
		\$ c.	\$ c.	\$ c.	\$ c.	\$ * c.	\$ c.
Acton.....	1,742	11,322.43	3,491.46	536.69	15,350.58	19,578.28	4,227.70
Agincourt.....	P.V.	1,090.80	391.98	755.36	2,238.14	3,940.63	1,702.49
Ailsa Craig.....	547	5,460.34	310.91	377.12	6,148.37	7,335.78	1,187.41
Alvinston.....	659	4,870.24	485.83	2,004.11	7,360.18	10,347.57	2,987.39
Ancaster Twp.....		4,163.09	3,167.83	1,618.61	8,949.53	12,936.13	3,986.60
Aylmer.....	2,251	9,664.18	3,662.09	1,874.71	15,200.98	20,643.95	5,442.97
Ayr.....	817	3,240.87	810.26	960.02	5,011.15	7,283.58	2,272.43
Baden.....	P.V.	7,537.56	625.44	150.12	8,313.12	9,668.03	1,354.91
Beachville.....	P.V.	11,322.23	585.60	136.93	12,044.76	14,244.93	2,200.17
Belle River.....	580	2,578.76	155.48	856.61	3,590.85	6,084.73	2,493.88
Blenheim.....	1,580	7,697.88	2,523.51	1,050.76	11,272.15	16,325.33	5,053.18
Bolton.....	658	6,224.63	1,012.45	1,412.66	8,649.74	9,274.61	624.87
Bothwell.....	613	6,398.47	854.91	1,075.71	8,329.09	11,144.42	2,815.33
Brampton.....	4,407	37,024.93	6,678.69	3,363.55	47,067.17	49,057.96	1,990.79
Brantford.....	31,362	157,242.10	39,127.10	38,255.09	234,624.29	255,472.07	20,847.78
Brantford Twp.....		9,879.88	4,710.84	4,674.73	19,265.45	25,126.77	5,861.32
Brigden.....	P.V.	3,811.02	544.31	906.11	5,261.44	5,535.11	273.67
Burford.....	P.V.	3,154.04	930.12	893.01	4,977.17	7,257.11	2,279.94
Burgessville.....	P.V.	1,613.02	239.78	309.05	2,161.85	2,585.97	424.12
Caledonia.....	1,335	2,971.67	582.37	302.52	3,856.56	5,711.08	1,854.52
Chatham.....	15,084	87,683.98	45,946.33	22,292.64	155,922.95	192,113.47	36,190.52
Chippawa.....	1,029	2,405.09	1,272.63	1,205.29	4,883.01	7,325.27	2,442.26
Clinton.....	1,941	12,244.94	3,178.52	2,795.16	18,218.62	20,327.90	2,109.28
Comber.....	P.V.	4,864.69	703.20	684.66	6,252.55	8,601.29	2,348.74
Dashwood.....	P.V.	2,902.87	284.02	235.88	3,422.77	3,672.72	249.95
Delaware.....	P.V.	779.56	106.15	246.92	1,132.63	1,733.12	600.49
Dereham Twp.....		3,183.99	1,229.45	4,074.21	8,487.65	9,409.81	922.16
Dorchester.....	P.V.	1,273.77	423.05	269.52	1,966.34	4,304.81	2,338.47
Drayton.....	618	3,664.80	390.22	539.95	4,594.97	6,367.62	1,772.65
Dresden.....	1,456	7,124.42	2,800.56	1,197.96	11,122.94	14,485.97	3,363.03
Drumbo.....	P.V.	1,119.65	734.67	268.85	2,123.17	2,708.55	585.38
Dublin.....	P.V.	2,014.25	351.59	582.83	2,948.67	3,124.24	175.57
Dundas.....	5,100	24,781.50	9,840.49	3,400.49	38,022.48	51,481.58	13,459.10
Dunnville.....	3,583	12,208.52	4,539.39	5,057.27	21,805.18	29,029.40	7,224.22
Dutton.....	845	5,417.93	1,351.68	396.80	7,166.41	8,409.53	1,243.12
Elmira.....	2,370	15,604.71	3,906.78	1,356.45	20,867.94	27,692.57	6,824.63
Elora.....	1,091	10,017.89	3,666.09	947.61	14,631.59	17,942.91	3,311.32
Embrow.....	463	3,293.66	357.22	625.22	4,276.10	5,625.10	1,349.00
Etobicoke Twp.....		19,929.23	13,555.49	11,232.97	44,717.69	66,001.11	21,283.42
Exeter.....	1,507	10,133.06	2,527.09	1,060.98	13,721.13	17,400.48	3,679.35
Fergus.....	1,762	9,681.33	3,233.43	1,584.51	14,499.27	18,115.09	3,615.82
Ford City.....	5,113	46,023.23	8,934.75	5,553.16	60,511.14	64,953.59	4,442.45
Forest.....	1,422	6,155.30	2,980.64	2,415.64	11,551.58	15,832.20	4,280.62
Galt.....	13,332	120,174.20	32,445.90	40,261.89	192,881.99	185,908.11	.....
Georgetown.....	2,098	23,838.37	4,454.17	1,056.22	29,348.76	34,675.94	5,327.18

## " B "

## of Hydro Municipalities for Year Ended December 31, 1923

## SYSTEM

Gross deficit	Depreciation	Net surplus	Net deficit	Number of consumers					Per cent of consumers to population	Horse-power taken in Dec., 1923
				Dom. light	Com'l light	Po- wer	Rural	Total		
\$ c.	\$ c.	\$ c.	\$ c.							
.....	730.00	3,497.70	.....	383	74	18	.....	475	27.3	472.5
.....	173.00	1,529.49	.....	84	10	2	.....	96	.....	29.4
.....	310.00	877.41	.....	137	30	3	1	171	31.2	160.3
.....	419.00	2,568.39	.....	140	52	6	.....	198	30.0	62.0
.....	761.00	3,225.60	.....	486	47	4	.....	537	.....	211.8
.....	708.00	4,734.97	.....	480	123	10	.....	613	27.2	276.0
.....	380.00	1,892.43	.....	143	47	3	.....	193	23.6	111.9
.....	289.00	1,065.91	.....	89	25	4	.....	118	.....	271.6
.....	410.00	1,790.17	.....	76	29	3	.....	108	.....	398.1
.....	267.00	2,226.88	.....	97	19	2	.....	118	20.3	64.3
.....	764.00	4,289.18	.....	389	101	13	.....	503	31.9	246.3
.....	598.00	26.87	.....	122	41	9	.....	172	26.1	154.2
.....	393.00	2,422.33	.....	159	53	14	.....	226	36.8	149.4
.....	1,202.00	788.79	.....	1,088	212	51	14	1,365	30.9	1,365.1
.....	13,108.00	7,739.78	.....	5,230	587	90	.....	5,907	18.8	7,305.6
.....	1,387.00	4,474.32	.....	563	41	5	.....	609	.....	.....
.....	214.00	59.67	.....	85	38	4	.....	127	.....	38.8
.....	264.00	2,015.94	.....	152	38	5	.....	195	.....	83.1
.....	107.00	.....	.....	50	12	1	.....	63	.....	21.7
.....	358.00	1,496.52	.....	100	64	8	.....	172	12.8	139.4
.....	7,792.00	28,398.52	.....	3,491	625	128	.....	4,244	28.2	3,477.1
.....	397.00	2,045.26	.....	190	26	5	.....	221	21.4	119.3
.....	1,062.00	1,047.28	.....	411	131	11	.....	553	33.6	321.7
.....	247.00	2,101.74	.....	77	42	2	.....	121	.....	125.2
.....	128.00	121.95	.....	51	26	2	.....	79	.....	50.1
.....	98.00	502.49	.....	42	11	.....	.....	53	.....	12.6
.....	1,295.00	.....	372.84	.....	.....	.....	187	187	.....	96.7
.....	256.00	2,082.47	.....	117	15	4	.....	136	.....	22.7
.....	270.00	1,502.65	.....	119	42	3	.....	164	26.6	60.3
.....	617.00	2,746.03	.....	284	112	.....	.....	396	27.1	266.0
.....	143.00	442.38	.....	77	22	1	.....	100	.....	36.1
.....	155.00	20.57	.....	25	19	4	.....	48	.....	29.7
.....	1,075.00	12,384.10	.....	949	165	51	126	1,291	25.3	1,666.8
.....	1,775.00	5,449.22	.....	347	162	20	.....	529	14.7	457.1
.....	360.00	883.12	.....	171	72	6	2	251	29.8	155.5
.....	1,093.00	5,731.63	.....	407	108	22	.....	537	23.0	541.5
.....	800.00	2,511.32	.....	255	65	3	1	324	29.6	265.6
.....	284.00	1,065.00	.....	82	33	4	1	120	25.9	32.9
.....	4,750.00	16,533.42	.....	2,704	176	19	.....	2,899	.....	1,139.4
.....	684.00	2,995.35	.....	326	97	8	1	432	28.6	280.0
.....	842.00	2,773.82	.....	380	96	13	.....	489	27.7	336.4
.....	1,719.00	2,723.45	.....	1,155	150	30	.....	1,335	26.1	1,433.0
.....	792.00	3,488.62	.....	391	104	22	.....	517	36.4	153.5
6,973.88	12,378.31	.....	19,352.19	3,242	492	120	.....	3,854	28.8	5,114.0
.....	1,525.00	3,802.18	.....	460	91	27	79	657	31.3	588.0



# STATEMENT

## Condensed Operating Reports of Electrical Departments

### NIAGARA

Municipality	Population	Cost of power purchased	Cost of operation and maintenance	Debenture charges and interest	Total cost of operation	Revenue	Gross surplus
		\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Glencoe.....	835	4,696.39	1,225.09	2,560.64	8,482.12	10,860.11	2,377.99
Goderich.....	4,108	30,138.94	7,160.50	4,290.20	41,589.64	47,874.42	6,284.78
Grantham Twp.....		2,478.87	1,082.77	3,139.12	6,700.76	8,479.00	1,778.24
Granton.....	P.V.	2,658.88	195.91	276.97	3,131.76	3,958.02	826.26
Guelph.....	18,027	137,764.19	32,321.35	8,336.76	178,422.30	219,354.93	40,932.63
Hagersville.....	1,271	15,358.57	3,241.07	381.33	18,980.97	22,500.43	3,519.46
Hamilton.....	118,243	536,174.43	170,590.38	133,241.34	840,006.15	880,201.15	40,195.00
Harriston.....	1,311	9,986.49	1,471.35	1,128.78	12,586.62	14,689.62	2,103.00
Hensall.....	738	3,400.76	1,132.92	878.38	5,412.06	6,685.12	1,273.06
Hespeler.....	2,853	15,247.26	4,983.55	3,737.64	23,968.45	30,113.43	6,144.98
Highgate.....	417	2,841.95	280.41	281.93	3,404.29	4,778.18	1,373.89
Ingersoll.....	5,253	38,917.76	10,816.25	3,765.29	53,499.30	62,553.02	9,053.72
Kitchener.....	22,717	239,577.35	58,470.12	24,177.57	322,225.04	354,609.51	32,384.47
Lambeth.....	P.V.	2,083.02	421.64	280.21	2,784.87	4,071.98	1,287.11
Listowel.....	2,429	16,122.12	5,221.08	3,727.26	25,070.46	30,662.49	5,592.03
London.....	59,784	460,908.16	145,390.30	88,088.42	694,386.88	783,055.21	88,668.33
Louth Twp.....			179.05	523.63	702.68	941.17	238.49
Lucan.....	624	4,890.79	1,722.05	391.29	7,004.13	8,261.88	1,257.75
Lynden.....	P.V.	4,723.30	189.25	298.02	5,210.57	6,385.44	1,174.87
Markham.....	970	4,395.98	2,118.02	1,122.68	7,636.68	9,386.72	1,750.04
Merlin.....	P.V.	5,071.44	606.53	1,200.17	6,878.14	9,432.77	2,554.63
Merritton.....	2,589	6,825.70	5,703.48	791.34	13,320.52	15,929.91	2,609.39
Milton.....	1,900	32,620.76	4,914.52	1,761.66	39,296.94	35,956.51	
Milverton.....	1,054	13,536.97	1,410.42	712.98	15,660.37	16,398.92	738.55
Mimico.....	4,187	23,877.73	8,846.72	4,594.99	37,319.44	37,308.29	
Mitchell.....	1,699	9,569.91	3,195.90	1,288.97	14,054.78	18,953.80	4,899.02
Moorefield.....	P.V.	2,476.93	261.54	365.07	3,103.54	3,405.98	302.44
Mt. Brydges.....	P.V.	1,602.06	364.49	225.50	2,192.05	3,559.62	1,367.57
Newbury.....	301	1,460.09	72.52	815.72	2,348.33	3,099.79	751.46
New Hamburg.....	1,401	11,182.64	3,332.47	1,171.98	15,687.09	19,101.02	3,413.93
New Toronto..	2,947	73,211.65	8,621.84	459.20	82,292.69	89,932.37	7,639.68
Niagara Falls..	15,895	88,978.78	31,597.97	38,057.15	158,633.90	185,771.00	27,137.10
Niagara-on-the-Lake.....	1,714	4,814.78	4,112.88	1,520.24	10,447.90	13,262.48	2,814.58
Norwich.....	1,307	10,591.46	9,836.69	537.11	20,965.26	25,801.47	4,836.21
Oil Springs....	491	8,372.37	1,996.84	1,501.19	11,870.40	15,185.25	3,314.85
Otterville.....	P.V.	1,967.91	707.29	268.57	2,943.77	4,003.33	1,059.56
Palmerston....	1,780	9,607.05	2,425.03	1,513.04	13,545.12	17,994.16	4,449.04
Paris.....	4,400	26,586.60	5,257.22	6,684.38	38,528.20	42,501.80	3,973.60
Parkhill.....	1,201	4,362.96	566.48	1,159.53	6,088.97	8,865.31	2,776.34
Petrolia.....	2,911	27,393.26	7,049.70	3,348.20	37,791.16	47,086.48	9,295.32
Plattsville.....	P.V.	2,622.97	204.27	398.28	3,225.52	3,408.25	182.72
Point Edward..	1,150	5,555.30	1,301.07	742.83	7,599.20	10,466.65	2,867.45
Port Colborne..	3,123	12,242.79	4,756.39	5,265.30	22,264.48	26,050.81	3,786.33
Port Credit....	1,119	5,715.72	1,178.10	354.53	7,248.35	9,541.87	2,293.52
Port Dalhousie.	1,424	5,712.90	2,981.11	1,935.29	10,629.30	13,935.19	3,305.89

\*Includes rural consumers in North and South Norwich Townships.

## " B "—Continued

## of Hydro Municipalities for Year Ended December 31, 1923

## SYSTEM—Continued

Gross deficit	Depreciation	Net surplus	Net deficit	Number of consumers					Per cent of consumers to population	Horse-power taken in Dec., 1923
				Dom. light	Com'l light	Po- wer	Rural	Total		
\$ c.	\$ c.	\$ c.	\$ c.							
	491.00	1,886.99		186	69	6		261	32.4	99.1
	2,960.00	3,324.78		1,008	207	19	40	1,274	31.0	748.6
	1,021.20	757.04					282	282		127.3
	143.00	683.26		63	24	2		89		27.8
	9,661.00	31,271.63		3,938	615	109		4,662	25.8	5,871.3
	454.00	3,065.46		225	86	12		323	25.4	776.0
	23,113.99	17,081.01		24,543	2,564	708		27,815	23.5	25,168.0
	506.00	1,597.00		245	88	9		342	26.0	200.6
	345.00	928.06		141	54	10	3	208	28.1	73.7
	1,517.00	4,627.98		558	102	19	29	708	24.8	682.8
	187.00	1,186.89		82	32	5		119	28.5	33.5
	2,762.00	6,291.72		1,159	231	52	10	1,452	27.6	1,633.1
	16,100.36	16,284.11		4,619	687	223		5,529	24.3	10,174.2
	195.00	1,092.11		105	20	3		128		59.6
	1,352.00	4,240.03		540	143	23		706	29.0	458.4
	50,448.31	38,220.02		14,953	1,881	545		17,379	29.0	19,490.6
	90.76	147.73					58	58		
	390.00	867.75		152	39	7	1	199	31.8	163.5
	152.00	1,022.87		72	18	1		91		145.3
	361.00	1,389.04		194	49	5		248	35.9	111.2
		2,554.63		71	29	3		103		83.0
	630.00	1,979.39		580	55	4		639	24.6	587.0
3,340.43	398.00		3,738.43	338	87	23		448	23.5	1,185.3
	445.00	293.55		177	69	6		252	23.9	455.0
11.15	2,151.00		2,162.15	1,194	98	11		1,303	31.1	1,206.4
	1,607.00	3,292.02		375	104	24		503	29.6	283.0
	108.00	194.44		35	17	2		54		19.5
	160.00	1,207.57		96	26			122		45.5
	172.00	579.46		44	23	1		68	22.5	26.8
	397.00	3,016.93		268	71	14		353	32.3	385.4
	1,766.00	5,873.68		829	99	18		946	32.1	2,218.5
	11,637.00	15,500.10		3,329	546	87		3,962	24.9	5,610.0
	527.00	2,287.58		328	79	7	5	419	24.5	220.4
	1,770.00	3,066.21		338	92	8	169	607	*	400.8
	470.00	2,844.85		49	25	35		109	22.1	270.6
	191.00	868.56		98	19	4		121		63.9
	723.00	3,726.04		315	80	7		402	22.6	260.7
	3,193.00	780.60		927	173	17	4	1,121	25.4	912.8
	417.00	2,359.34		165	63	4		232	19.3	86.1
	1,737.00	7,558.32		552	187	67		806	27.6	695.7
	169.00	13.72		78	28	2		108		41.5
	430.00	2,437.45		222	34	10		266	23.1	191.0
	1,268.00	2,518.33		695	175	14		884	28.3	551.0
	605.00	1,688.52		270	55	8	3	336	30.0	222.5
	470.00	2,835.89		516	29	10	60	615	43.1	167.3

# STATEMENT

## Condensed Operating Reports of Electrical Departments

### NIAGARA

Municipality	Population	Cost of power purchased	Cost of operation and maintenance	Debenture charges and interest	Total cost of operation	Revenue	Gross surplus
		\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Port Dover....	1,380	4,030.54	684.21	2,242.94	6,957.69	9,725.04	2,767.35
Port Stanley....	717	8,736.04	3,427.04	1,209.54	13,372.62	15,544.83	2,172.21
Preston.....	5,547	52,542.42	14,067.96	9,703.34	76,313.72	84,415.42	8,101.70
Princeton.....	P.V.	1,441.72	123.92	258.42	1,824.06	2,597.52	773.46
Queenston.....	P.V.	875.53	268.77	832.80	1,977.10	2,846.94	869.84
Ridgetown.....	2,267	9,263.44	2,965.18	1,151.58	13,380.20	18,310.58	4,930.38
Riverside.....	3,000	9,114.80	4,419.91	2,435.54	15,970.25	18,832.88	2,862.63
Rockwood.....	P.V.	3,049.18	602.40	25.90	3,677.48	4,537.11	859.63
Rodney.....	756	2,833.33	585.32	400.47	3,819.12	6,374.17	2,555.05
St. Catharines..	20,961	100,783.74	42,799.40	18,294.27	161,877.41	192,077.75	30,200.34
St. Clair Beach.	82	1,605.36	311.52	623.54	2,540.42	2,872.79	332.37
St. George.....	P.V.	3,113.32	630.25	181.92	3,925.49	5,226.97	1,301.48
St. Jacobs.....	P.V.	1,631.70	438.99	351.26	2,421.95	2,804.05	382.10
St. Marys.....	4,039	26,581.86	7,134.50	5,258.99	38,975.35	43,532.93	4,557.58
St. Thomas.....	17,892	96,459.12	43,974.60	9,480.81	149,914.53	181,105.06	31,190.53
Sarnia.....	14,905	125,148.47	40,239.69	25,401.14	190,789.30	215,823.54	25,034.24
Scarboro Twp..	.....	17,671.33	11,646.68	12,223.64	41,541.65	60,551.70	19,010.05
Seaforth.....	1,950	15,834.02	3,073.07	882.02	19,789.11	20,087.57	298.46
Simcoe.....	3,951	12,870.90	3,334.04	2,445.24	18,650.18	22,973.63	4,323.45
Springfield....	432	1,785.41	388.39	644.28	2,818.08	3,507.78	689.70
Stamford Twp..	.....	12,037.05	8,637.27	6,607.08	27,281.40	33,916.24	6,634.84
Stouffville....	1,084	773.42	312.46	.....	1,085.88	1,315.78	229.90
Stratford.....	17,611	132,724.25	27,288.80	24,990.81	185,003.86	169,743.26	.....
Strathroy.....	2,627	17,544.53	5,484.52	2,858.85	25,887.90	33,463.18	7,575.28
Sutton.....	755	1,043.58	312.00	230.20	1,585.78	1,388.05	.....
Tavistock.....	1,003	7,995.54	1,541.89	390.31	9,927.74	9,597.38	.....
Tecumseh.....	1,019	3,748.16	3,002.61	1,980.93	8,731.70	8,404.59	.....
Thamesford....	P.V.	4,237.52	425.58	397.27	5,060.37	7,047.37	1,987.00
Thamesville....	817	3,705.51	863.28	665.68	5,234.47	9,283.64	4,049.17
Thedford.....	583	3,012.00	552.22	1,296.94	4,861.16	6,412.76	1,551.60
Thorndale.....	P.V.	2,815.79	279.67	317.94	3,413.40	3,807.66	394.26
Thorold.....	5,243	11,577.19	9,370.15	599.71	21,547.05	27,985.79	6,438.74
Tilbury.....	1,851	8,194.46	1,801.69	1,029.09	11,025.24	18,826.25	7,801.01
Tillsonburg....	3,027	16,991.51	6,459.45	2,052.68	25,503.64	32,997.28	7,493.64
Toronto.....	522,942	313,4723.10	206,9276.00	147,1821.61	667,5820.71	725,3271.85	577,451.14
Toronto Twp..	.....	12,696.23	9,124.73	6,561.51	28,382.47	48,836.16	20,453.69
Vaughan Twp..	.....	1,709.28	571.75	2,665.34	4,946.37	7,825.82	2,879.45
Walkerville....	7,303	145,618.19	44,801.12	21,177.13	211,596.44	230,275.76	18,679.32
Wallaceburg....	3,921	33,106.79	9,975.99	2,681.20	45,763.98	60,094.93	14,330.95
Wardsville....	212	918.26	150.86	619.28	1,688.40	2,091.65	403.25
Waterdown....	815	5,641.58	1,836.22	1,504.45	8,982.25	10,617.92	1,635.67
Waterford.....	1,112	6,143.86	674.42	1,519.89	8,338.17	11,615.87	3,277.70
Waterloo.....	5,976	46,640.40	15,660.74	8,288.61	70,589.75	82,806.47	12,216.72
Watford.....	1,039	4,176.27	1,041.79	801.81	6,019.87	10,972.63	4,952.76
Welland.....	8,880	47,141.58	17,828.42	21,089.98	86,059.98	73,749.35	.....

\*\*Total includes summer consumers.



## " B "—Continued

## of Hydro Municipalities for Year Ended December 31, 1923

## SYSTEM—Continued

Gross deficit	Depreciation	Net surplus	Net deficit	Number of consumers					Per cent of consumers to population	Horse-power taken in Dec., 1923
				Dom. light	Com'l light	Po-wer	Rural	Total		
\$ c.	\$ c.	\$ c.	\$ c.							
647.00		2,120.35		208	88	4		300	21.7	119.8
846.00		1,326.21		518	60	14		592	**	101.8
4,558.00		3,543.70		1,234	202	53		1,489	27.0	2,195.7
111.00		662.46		86	6	1		93		28.9
178.00		691.84		64	3	1		68		50.9
720.00		4,210.38		424	128	14		566	24.9	288.7
862.00		2,000.63		492	21	5		518	17.2	289.5
89.40		770.23		125	18	4		147		63.0
288.00		2,267.05		148	60	4		212	28.0	80.4
10,212.00		19,988.34		4,598	445	105		5,148	24.5	5,878.0
135.00		197.37		34	1	2		37	45.1	37.5
187.00		1,114.48		100	26	4		130		87.1
188.00		194.10		69	23	2		94		51.4
3,057.00		1,500.58		874	198	42		1,114	27.5	696.7
9,642.00		21,548.53		3,668	593	112	243	4,616	25.8	3,949.0
10,042.00		14,992.24		3,923	558	79		4,560	30.6	4,544.2
3,375.00		15,635.05		2,552	172	25		2,749		1,096.6
597.00		298.54		504	110	12		626	32.1	524.9
1,356.00		2,967.45		339	195	24		558	14.1	601.8
		689.70		70	25	2		97	22.4	26.8
2,191.00		4,443.84		856	12	11		879		754.6
		229.90		152	54	3		209	19.2	87.0
15260.60	13,170.00	28430.60		3,875	499	163	114	4,651	26.4	2,026.8
	1,821.00	5,754.28		650	173	25		848	32.2	552.2
197.73		197.73		160	34	1		195	37.7	50.9
330.36	393.00	723.36		200	66	4		270	26.9	227.8
327.11	564.00	891.11		302	33	1		336	32.9	80.4
	274.00	1,713.00		90	27	6		123		113.9
	384.00	3,665.17		196	83	6		285	34.8	88.4
	221.00	1,330.60		105	36	2		143	24.5	40.2
	137.00	257.26		54	26	1		81		28.8
	1,861.00	4,577.74		1,029	175	7		1,211	23.0	600.5
	484.00	7,317.01		255	97	11		363	19.6	287.0
	1,758.17	5,735.47		633	172	24		829	27.3	570.2
445394.52	132,056.62	102040		15,702	2,596			120338	23.0	121996.0
	3,459.00	16,994.69		925		13		938		537.4
	751.00	2,128.45		63	14	5	15	97		
	7,934.00	10,745.32		1,796	246	72		2,114	28.9	4,729.9
	1,890.00	12,440.95		812	174	29		1,015	25.8	1,040.2
	126.00	277.25		43	16	2		61	28.7	12.8
	977.00	658.67		170	33	4	89	296	36.3	173.0
	596.00	2,681.70		260	53	11	14	338	30.3	187.6
	5,292.00	6,924.72		1,275	185	69	19	1,548	25.9	1,943.7
	400.00	4,552.76		215	73	9		297	28.5	97.0
12310.63	6,760.00	19070.63		1,440	259	56		1,755	19.7	1,983.18

# STATEMENT

## Condensed Operating Reports of Electrical Departments

### NIAGARA

Municipality	Population	Cost of power purchased	Cost of operation and maintenance	Debenture charges and interest	Total cost of operation	Revenue	Gross surplus
		\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Wellesley.....	P.V.	5,950.70	595.10	607.92	7,153.72	7,846.15	692.43
West Lorne....	803	8,278.26	987.80	274.45	9,540.51	11,730.01	2,189.50
Weston.....	3,299	47,309.20	9,863.64	3,910.19	61,083.03	69,502.11	8,419.08
Windsor.....	38,530	367,561.53	172,358.85	86,062.97	625,983.35	739,300.88	113,317.53
Woodbridge....	679	5,536.29	1,081.44	353.40	6,971.13	8,455.59	1,484.46
Woodstock....	10,164	68,322.41	18,580.13	5,881.45	92,783.99	109,320.06	16,536.07
Wyoming.....	489	2,305.28	411.38	921.06	3,637.72	4,324.73	687.01
Zurich.....	P.V.	3,584.28	427.55	143.54	4,155.37	5,366.35	1,210.98
Total.....	1149701*	7331251.25	3402314.36	2302508.15	13036073.76	14529113.05	1531791.18

### SEVERN

Alliston.....	1,321	6,854.29	1,921.26	2,824.22	11,599.77	13,299.15	1,699.38
Barrie.....	6,888	28,834.66	10,257.16	3,476.93	42,568.75	53,720.74	11,151.99
Beeton.....	586	5,672.01	519.87	1,088.92	7,280.80	7,846.46	565.66
Bradford.....	1,028	5,894.29	786.62	1,768.47	8,449.38	9,784.02	1,334.64
Coldwater.....	647	2,646.78	708.34	452.02	3,807.14	6,876.38	3,069.24
Collingwood...	6,237	40,812.58	7,282.16	1,728.94	49,823.68	65,518.57	15,694.89
Cookstown....	P.V.	1,957.54	392.82	1,235.07	3,585.43	4,008.93	423.50
Creemore.....	540	3,675.32	526.40	350.31	4,552.03	5,624.51	1,072.48
Elmvale.....	P.V.	4,719.86	891.69	295.28	5,906.83	7,893.80	1,986.97
Midland.....	7,022	38,679.92	10,280.00	6,726.63	55,686.55	75,750.99	20,064.44
Penetang.....	3,920	15,913.78	6,740.01	2,710.71	25,364.50	31,304.87	5,940.37
Port McNicoll..	576	1,216.32	409.95	640.22	2,266.49	3,443.40	1,176.91
Stayner.....	1,004	4,199.20	947.42	942.33	6,088.95	8,699.14	2,610.19
Thornton.....	P.V.	1,181.82	119.46	729.02	2,030.30	1,978.18	.....
Tottenham....	512	3,721.08	542.45	929.65	5,193.18	5,780.85	587.67
Victoria Harb'r.	1,485	1,837.13	532.64	488.58	2,858.35	4,231.45	1,373.10
Waubashene..	P.V.	1,020.19	374.86	284.95	1,680.00	2,449.01	769.01
Total.....	33,766	168,836.77	43,233.11	26,672.25	238,742.13	308,210.45	69,520.44

\*Police Villages taken as 500 Population and Townships as 2,000 Population.

## “ B ”—Continued

## of Hydro Municipalities for Year Ended December 31, 1923

## SYSTEM—Continued

Gross deficit	Depreciation	Net surplus	Net deficit	Number of consumers					Per cent of consumers to population	Horse-power taken in Dec., 1923
				Dom. light	Com'l light	Po- wer	Rural	Total		
\$ c.	\$ c.	\$ c.	\$ c.							
.....	245.00	447.43	.....	91	33	3	.....	127	.....	152.8
.....	315.00	1,874.50	.....	143	55	3	.....	201	25.0	282.8
.....	3,004.00	5,415.08	.....	1,048	135	17	.....	1,200	36.3	1,769.71
.....	24,427.00	88,890.53	.....	10,252	1,441	311	1,769	13,773	35.7	14,960.0
.....	420.00	1,064.46	.....	151	49	6	1	207	30.4	286.3
.....	7,046.00	9,490.07	.....	2,314	421	84	.....	2,819	27.7	3,135.3
.....	255.00	432.01	.....	97	41	2	.....	140	28.6	42.8
.....	179.00	1,031.98	.....	75	43	4	2	124	.....	33.7
38751.89	786890.02	781,386.85	75237.58	242275	37,089	6,974	3,342	289680	.....	290162.59

## SYSTEM

.....	846.00	853.38	.....	279	83	11	5	378	28.6	132.0
.....	1,092.00	10,059.99	.....	1,597	392	32	1	2,022	29.3	1,400.8
.....	367.00	198.66	.....	93	32	3	.....	128	21.8	101.8
.....	479.00	855.64	.....	137	49	3	.....	189	18.3	108.5
.....	378.00	2,691.24	.....	98	49	6	.....	153	23.6	96.5
.....	2,932.00	12,762.89	.....	1,230	254	59	2	1,545	24.7	1,300.2
.....	317.00	106.50	.....	81	26	1	.....	108	.....	37.5
.....	257.00	815.48	.....	126	55	6	.....	187	34.6	69.7
.....	374.00	1,612.97	.....	110	61	10	.....	181	.....	206.7
.....	4,187.00	15,877.44	.....	1,336	205	50	.....	1,591	22.6	1,710.5
.....	836.00	5,104.37	.....	438	99	33	.....	570	14.5	552.2
.....	216.00	960.91	.....	112	33	1	.....	146	25.3	65.0
.....	468.00	2,142.19	.....	253	54	8	.....	315	31.3	177.2
52.12	187.00	.....	239.12	38	10	.....	.....	48	.....	14.7
.....	269.00	318.68	.....	112	50	3	.....	165	32.2	40.8
.....	232.00	1,141.10	.....	127	38	.....	.....	165	11.1	52.2
.....	131.00	638.01	.....	90	19	4	.....	113	.....	36.1
52.12	13,568.00	56,139.44	239.12	6,257	1,509	230	8	8,004	.....	6,102.4



# STATEMENT

## Condensed Operating Reports of Electrical Departments

## EUGENIA

Municipality	Population	Cost of power purchased	Cost of operation and maintenance	Debenture charges and interest	Total cost of operation	Revenue	Gross surplus
		\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Arthur.....	1,222	9,204.66	929.10	2,042.84	12,176.60	12,005.86	.....
Chatsworth....	287	1,531.25	268.13	491.31	2,290.69	3,216.38	925.69
Chesley.....	1,803	13,721.78	1,954.90	2,309.26	17,985.94	21,052.70	3,066.76
Dundalk.....	725	4,391.12	576.52	291.69	5,259.33	7,410.25	2,150.92
Durham.....	1,622	12,258.65	1,906.17	2,446.44	16,611.26	22,909.68	6,298.42
Elmwood..	P.V.	1,611.75	217.75	630.95	2,460.45	2,971.38	510.93
Flesherton....	410	2,407.05	360.65	662.23	3,429.93	3,960.54	530.61
Grand Valley..	583	5,120.19	413.33	802.03	6,335.55	7,910.69	1,575.14
Hanover.....	2,695	46,917.71	7,158.60	8,196.19	62,272.50	66,174.97	3,902.47
Holstein.....	P.V.	1,463.18	194.90	415.91	2,073.99	2,003.29	.....
Kincardine....	2,159	12,973.87	4,629.90	5,475.40	23,079.17	25,217.27	2,138.10
Lucknow.....	887	5,804.45	652.76	1,640.39	8,097.60	9,186.52	1,088.92
Markdale.....	908	3,306.31	965.71	728.50	5,000.52	6,430.58	1,430.06
Mount Forest..	1,761	10,024.61	2,420.20	1,985.68	14,430.49	18,197.12	3,766.63
Neustadt.....	445	6,861.13	639.59	1,499.38	9,000.10	9,386.07	385.97
Orangeville....	2,503	12,836.51	2,341.19	3,132.49	18,310.19	20,549.81	2,239.62
Owen Sound....	12,360	54,185.83	23,983.65	7,352.77	85,522.25	98,865.17	13,342.92
Paisley.....	749	1,269.58	163.63	240.21	1,673.42	1,810.56	137.14
Priceville.....	P.V.	695.47	50.00	675.99	1,421.46	1,071.12	.....
Ripley.....	P.V.	4,600.03	452.31	1,044.99	6,097.33	5,696.74	.....
Shelburne.....	1,101	7,332.98	862.20	1,630.45	9,825.63	12,874.48	3,048.85
Tara.....	521	3,877.59	650.03	1,492.18	6,019.80	6,717.69	697.89
Teeswater.....	838	6,585.01	550.85	2,867.37	10,003.23	9,587.67	.....
Wingham.....	2,470	18,498.64	5,143.81	6,651.34	30,293.79	33,995.83	3,702.04
Total.....	38,049	247,479.35	57,485.88	54,705.99	359,671.22	409,202.37	50,939.08

## WASDELLS

Beaverton.....	986	6,534.11	1,464.39	1,422.04	9,420.54	14,538.08	5,117.54
Brechin.....	P.V.	2,421.50	368.24	431.23	3,220.97	3,372.83	151.86
Cannington....	951	4,777.73	1,699.81	1,233.80	7,711.34	9,493.32	1,781.98
Kirkfield.....	P.V.	1,444.50	153.08	559.47	2,157.05	2,306.22	149.17
Port Perry.....	1,162	5,266.79	815.40	962.83	7,045.02	11,917.57	4,872.55
Sunderland....	P.V.	3,427.84	533.15	1,146.65	5,107.64	6,490.94	1,383.30
Uxbridge.....	1,492	5,525.26	1,191.93	972.82	7,690.01	12,733.55	5,043.54
Woodville.....	455	3,873.91	461.11	680.47	5,015.49	7,014.54	1,999.05
Total.....	6,546	33,271.64	6,687.11	7,409.31	47,368.06	67,867.05	20,498.99

## MUSKOKA

Gravenhurst...	1,621	9,025.15	4,938.74	4,009.78	17,973.67	21,754.83	3,781.16
Huntsville....	2,316	24,872.15	3,999.76	1,790.85	30,662.76	31,870.90	1,208.14
Total.....	3,937	33,897.30	8,938.50	5,800.63	48,636.43	53,625.73	4,989.30

## " B "—Continued

## of Hydro Municipalities for Year Ended December 31, 1923

## SYSTEM

Gross deficit	Depreciation	Net surplus	Net deficit	Number of consumers					Per cent of consumers to population	Horse-power taken in Dec., 1923
				Dom. light	Com'l light	Po- wer	Rural	Total		
\$ c. 170.74	\$ c. 628.00	\$ c. 773.69	\$ c. 798.74	140	76	4	.....	220	18.0	117.2
.....	152.00	.....	.....	56	27	1	.....	84	29.2	34.3
.....	765.00	2,301.76	.....	293	90	18	5	406	22.5	410.0
.....	265.00	1,885.92	.....	122	74	4	.....	200	27.5	137.2
.....	690.00	5,608.42	.....	285	95	8	.....	388	23.9	186.4
.....	160.00	350.93	.....	34	18	1	.....	53	.....	40.8
.....	223.00	307.61	.....	91	41	1	.....	133	32.4	53.6
.....	323.00	1,252.14	.....	114	52	2	.....	168	28.8	73.9
.....	2,045.00	1,857.47	.....	564	104	17	4	689	25.5	779.6
70.70	76.00	.....	146.70	33	21	1	.....	55	.....	13.0
.....	1,144.00	994.10	.....	378	103	17	.....	498	23.0	241.8
.....	402.00	686.92	.....	155	69	2	.....	226	25.4	98.6
.....	413.00	1,017.06	.....	153	72	9	2	236	25.9	112.6
.....	890.00	2,876.63	.....	274	133	6	.....	413	23.4	281.6
.....	383.00	2.97	.....	68	29	5	.....	102	22.9	132.7
.....	925.00	1,314.62	.....	294	118	18	.....	430	17.1	273.4
.....	4,501.66	8,841.26	.....	2,410	475	107	.....	2,992	24.2	1,919.5
.....	.....	137.14	.....	101	39	1	.....	141	18.8	66.7
350.34	134.00	.....	484.34	19	8	.....	.....	27	.....	10.0
400.59	260.00	.....	660.59	74	44	1	1	120	.....	38.8
.....	581.00	2,467.85	.....	234	86	8	.....	328	29.7	199.6
.....	349.00	348.89	.....	84	37	5	2	128	24.2	52.9
415.56	410.00	.....	825.56	136	60	3	.....	199	23.7	129.9
.....	1,698.00	2,004.04	.....	410	156	23	.....	589	23.8	332.4
1,407.93	17,417.66	35,029.42	2,915.93	6,522	2,027	262	14	8,825	.....	5,736.5

## SYSTEM

.....	422.00	4,695.54	.....	174	61	14	124	373	37.8	138.0
.....	86.00	65.86	.....	33	24	2	1	60	.....	44.2
.....	396.00	1,385.98	.....	194	72	12	3	281	29.5	109.9
.....	140.00	9.17	.....	22	17	1	.....	40	.....	26.8
.....	385.00	4,487.55	.....	216	62	8	.....	286	24.6	96.5
.....	176.00	1,207.30	.....	89	39	2	18	148	.....	81.7
.....	314.00	4,729.54	.....	178	76	11	.....	265	17.7	96.5
.....	126.00	1,873.05	.....	90	29	3	2	124	27.2	64.3
.....	2,045.00	18,453.99	.....	996	380	53	148	1,577	.....	657.9

## SYSTEM

.....	1,463.00	2,318.16	.....	343	88	10	.....	441	27.2	486.7
.....	627.00	581.14	.....	425	98	8	.....	531	22.9	942.3
.....	2,090.00	2,899.30	.....	768	186	18	.....	972	.....	1,429.0

# STATEMENT

## Condensed Operating Reports of Electrical Departments

## ST. LAWRENCE

Municipality	Popu- lation	Cost of power purchased	Cost of operation and main- tenance	Debenture charges and interest	Total cost of operation	Revenue	Gross surplus
		\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Alexandria.....	2,319	14,060.69	2,051.71	4,649.47	20,761.87	22,809.04	2,047.17
Apple Hill.....	P.V.	1,543.73	325.05	495.51	2,364.29	2,647.31	283.02
Brockville.....	9,377	44,794.60	19,575.68	13,363.17	77,733.45	131,831.34	54,097.89
Chesterville.....	941	9,802.42	1,479.88	619.01	11,901.31	15,756.53	3,855.22
Lancaster.....	612	4,363.86	354.46	1,087.84	5,806.16	3,987.18	.....
Martintown....	P.V.	972.60	90.64	463.16	1,526.40	1,489.85	.....
Maxville.....	785	4,945.04	660.20	1,487.02	7,092.26	7,016.78	.....
Prescott.....	2,723	9,572.36	7,004.97	1,395.50	17,972.83	24,433.46	6,460.63
Williamsburg...	P.V.	1,371.33	160.10	218.93	1,750.36	2,000.86	250.50
Winchester....	1,058	5,358.43	1,402.38	671.14	7,431.95	11,137.13	3,705.18
Total.....	19,315	96,785.06	33,105.07	24,450.75	154,340.88	223,109.48	70,699.61

## RIDEAU

Carleton Place.	4,123	37,278.09	6,446.52	4,571.68	48,296.29	46,255.12	.....
Kemptville....	1,220	6,545.73	1,584.26	1,759.65	9,889.64	15,724.98	5,835.34
Lanark.....	575	2,488.90	324.80	675.80	3,489.50	4,021.22	531.72
Perth.....	3,710	24,874.64	6,275.09	6,170.93	37,320.66	43,927.35	6,606.69
Smiths Falls...	6,529	39,300.24	9,640.59	16,864.72	65,805.55	74,129.29	8,323.74
Total.....	16,157	110,487.60	24,271.26	30,042.78	164,801.64	184,057.96	21,297.49

## THUNDER BAY

Port Arthur...	15,629	299,178.18	59,352.51	32,708.95	391,239.64	484,295.08	93,055.44
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## OTTAWA

Ottawa.....	112,899	140,720.48	126,629.99	61,446.04	328,796.51	420,614.85	91,818.34
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## TRENT

Bloomfield.....	512	3,193.88	333.12	888.89	4,415.89	5,713.31	1,297.42
Havelock.....	1,258	3,694.55	1,258.18	2,821.84	7,774.57	9,196.15	1,421.58
Kingston.....	22,234	69,433.53	67,787.95	21,845.79	159,067.27	206,999.69	47,932.42
Lakefield.....	1,193	4,623.44	1,256.90	2,341.51	8,221.85	12,353.40	4,131.55
Marmora.....	792	1,760.44	452.80	1,570.59	3,783.83	5,573.79	1,789.96
Norwood.....	748	3,277.02	919.59	2,431.06	6,627.67	8,257.84	1,630.17
Omeme.....	485	6,028.12	603.09	1,047.25	7,678.46	8,319.47	641.01
Peterboro.....	21,439	108,159.18	53,618.68	22,458.16	184,236.02	204,122.94	19,886.92
Picton.....	3,263	16,326.60	6,571.22	338.69	23,236.51	36,740.97	13,504.46
Warkworth....	P.V.	568.04	33.56	4.57	606.17	554.49	.....
Wellington....	840	3,169.90	849.38	1,495.07	5,514.35	8,220.42	2,706.07
Whitby.....	1,801	16,884.34	6,037.71	4,753.44	27,675.49	32,895.97	5,220.48
Total.....	55,065	237,119.04	139,722.18	61,996.86	438,838.08	538,948.44	100,162.04



## " B "—Continued

## of Hydro Municipalities for Year Ended December 31, 1923

## SYSTEM

Gross deficit	Depreciation	Net surplus	Net deficit	Number of consumers					Per cent of consumers to population	Horse-power taken in Dec., 1923
				Dom. light	Com'l light	Pow-er	Rural	Total		
\$ c.	\$ c.	\$ c.	\$ c.							
.....	705.00	1,342.17	.....	217	95	13	1	326	14.0	91.6
.....	101.00	182.02	.....	28	19	1	.....	48	.....	29.5
.....	3,147.00	50,950.89	.....	1,838	376	64	98	2,376	25.4	1,383.5
.....	362.00	3,493.22	.....	163	56	3	1	223	23.6	142.0
1,818.98	181.00	.....	1,999.98	70	22	1	.....	93	15.1	28.8
.....	36.55	82.00	.....	24	12	.....	3	39	.....	15.0
.....	75.48	331.00	.....	104	47	4	.....	155	19.7	85.8
.....	683.00	5,777.63	.....	473	147	20	.....	640	23.5	309.6
.....	82.00	168.50	.....	45	16	1	.....	62	.....	24.0
.....	142.00	3,563.18	.....	253	58	2	.....	313	29.5	116.6
1,931.01	5,816.00	65,477.61	2,525.01	3,215	848	109	103	4,275	.....	2,226.4

## SYSTEM

2,041.17	1,390.00	.....	3,431.17	755	168	17	.....	940	22.7	927.1
.....	487.00	5,348.34	.....	224	70	6	.....	300	14.5	136.7
.....	144.00	387.72	.....	82	29	2	.....	113	19.6	38.8
.....	1,824.00	4,782.69	.....	681	183	20	.....	884	23.8	570.2
.....	3,892.00	4,431.74	.....	1,323	247	36	19	1,625	24.8	896.7
2,041.17	7,737.00	14,950.49	3,431.17	3,065	697	81	19	3,862	.....	2,569.5

## SYSTEM

.....	13,500.00	79,555.44	.....	3,281	664	81	.....	4,026	25.7	18,231.0
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## SYSTEM

.....	46,726.00	45,092.34	.....	11,050	1,429	240	.....	12,719	11.2	13,137.0
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## SYSTEM

.....	243.00	1,054.42	.....	89	17	6	6	118	23.0	56.8
.....	550.00	871.58	.....	266	62	1	.....	329	26.1	88.2
.....	8,416.00	39,516.42	.....	3,917	832	133	.....	4,882	21.9	3,122.0
.....	571.00	3,560.55	.....	198	71	4	1	274	22.9	144.1
.....	330.00	1,459.96	.....	146	43	4	.....	193	24.3	51.4
.....	663.00	967.17	.....	178	70	3	.....	251	33.5	127.3
.....	357.00	284.01	.....	106	30	7	.....	143	29.4	156.3
.....	7,341.29	12,545.63	.....	4,966	743	124	.....	5,833	27.2	5,342.0
.....	854.00	12,650.46	.....	777	168	43	.....	988	30.2	404.8
51.68	.....	.....	51.68	39	26	.....	.....	65	.....	32.8
.....	422.00	2,284.07	.....	190	42	5	5	242	28.8	73.7
.....	1,245.78	3,974.70	.....	615	137	12	6	770	42.8	634.0
51.68	20,993.07	79,168.97	51.68	11,487	2,241	342	18	14,088	.....	10,233.4

## STATEMENT

## Condensed Operating Reports of Electrical Departments

## ALL SYSTEMS

System	Population	Power purchased	Operation and maintenance	Debenture charges and interest	Total cost of operation	Revenue	Gross surplus
		\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Niagara . . . . .	1,149,701	7,331,251.25	3,402,314.36	2,302,508.15	13,036,073.76	14,529,113.05	1,531,791.18
Severn . . . . .	33,766	168,836.77	43,233.06	26,672.25	238,742.13	308,210.45	69,520.44
Eugenia . . . . .	38,049	247,479.35	57,485.88	54,705.99	359,671.22	409,202.37	50,939.08
Wasdells . . . . .	6,546	33,271.64	6,687.11	7,409.31	47,368.06	67,867.05	20,498.99
Muskoka . . . . .	3,937	33,897.30	8,938.50	5,800.63	48,636.43	53,625.73	4,989.30
St. Lawrence . . .	19,315	96,785.06	33,105.07	24,450.75	154,340.88	223,109.48	70,699.61
Rideau . . . . .	16,157	110,487.60	24,271.26	30,042.78	164,801.64	184,057.96	21,297.49
Thunder Bay . . .	15,629	299,178.18	59,352.51	32,708.95	391,239.64	484,295.08	93,055.44
Ottawa . . . . .	112,899	140,720.48	126,629.99	61,446.04	328,796.51	420,614.85	91,818.34
Trent . . . . .	55,065	237,119.04	139,722.18	61,996.86	438,838.08	538,948.44	100,162.04
Grand Total . . .	1,451,064	8,699,026.67	3,901,739.92	2,607,741.71	15,208,508.35	17,219,044.46	2,054,771.91

## " B "—Continued

of Hydro Municipalities for Year Ended December 31, 1923

## —SUMMARY

Gross deficit	Depreciation	Net surplus	Net deficit	Number of consumers					Per cent of consumers to population	Horse-power taken in Dec., 1923
				Dom. light	Com'l light	Power	Rural	Total		
\$ c.	\$ c.	\$ c.	\$ c.							
38,751.89	786,890.02	781,386.85	75,237.58	242,275	37,089	6,974	3,342	289,680	.....	290,162.59
52.12	13,568.00	56,139.44	239.12	6,257	1,509	230	8	8,004	.....	6,102.4
1,407.93	17,417.66	35,029.42	2,915.93	6,522	2,027	262	14	8,825	.....	5,736.5
.....	2,045.00	18,453.99	.....	996	380	53	148	1,577	.....	657.9
.....	2,090.00	2,899.30	.....	768	186	18	.....	972	.....	1,429.0
1,931.01	5,816.00	65,477.61	2,525.01	3,215	848	109	103	4,275	.....	2,226.4
2,041.17	7,737.00	14,950.49	3,431.17	3,065	697	81	19	3,862	.....	2,569.5
.....	13,500.00	79,555.44	.....	3,281	664	81	.....	4,026	.....	18,231.0
.....	46,726.00	45,092.34	.....	11,050	1,429	240	.....	12,719	.....	13,137.0
51.68	20,993.07	79,168.97	51.68	11,487	2,241	342	18	14,088	.....	10,233.4
44,235.80	916,782.75	1,178,153.85	84,400.49	288,916	47,070	8,390	3,652	348,028	.....	350,485.69



## STATEMENT

## Detailed Operating Reports of Electrical Departments of

NIAGARA  
SYSTEM

Municipality Population	Acton 1,742	Agincourt P.V.	Ailsa Craig 547	Alvinston 659	Ancaster Township
<b>EARNINGS</b>					
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Domestic service.....	5,834.01	2,161.85	1,629.28	2,693.28	10,377.24
Commercial light.....	2,475.16	325.59	735.81	1,901.92	1,292.61
Commercial power.....	8,025.93	1,003.19	4,267.97	3,573.17	402.28
Municipal power.....	703.23			260.28	
Street lighting.....	2,058.45	450.00	624.00	1,918.92	864.00
Rural service.....			78.72		
Miscellaneous.....	481.50				
Total.....	19,578.28	3,940.63	7,335.78	10,347.57	12,936.13
<b>EXPENSES</b>					
Power purchased.....	11,322.43	1,090.80	5,460.34	4,870.24	4,163.09
Substation operation.....					
Substation maintenance.....					
Distribution system, operation and maintenance.....	2,355.11	7.40	31.99	145.27	1,271.73
Line transformer maintenance.....					
Meter maintenance.....					
Consumers' premises expenses.....					
Street lighting, operation and main- tenance.....	245.83	22.25	95.85	42.92	216.33
Promotion of business.....					
Billing and collecting.....					
General office, salaries and expenses.	818.59	362.33	183.07	297.64	1,679.77
Undistributed expenses.....	71.93				
Interest.....	137.90	453.62	213.51	1,121.45	1,362.50
Sinking fund and principal payments on debentures.....	398.79	301.74	163.61	882.66	256.11
Total expenses.....	15,350.58	2,238.14	6,148.37	7,360.18	8,949.53
Gross surplus.....	4,227.70	1,702.49	1,187.41	2,987.39	3,986.60
Gross loss.....					
Depreciation.....	730.00	173.00	310.00	419.00	761.00
Net surplus.....	3,497.70	1,529.49	877.41	2,568.39	3,225.60
Net loss.....					

“ C ”

## Hydro Municipalities for Year Ended December 31, 1923

Aylmer 2,251	Ayr 817	Baden P.V.	Beachville P.V.	Belle River 580	Blenheim 1,580	Bolton 658	Bothwell 613
\$ c. 8,741.34	\$ c. 2,300.13	\$ c. 1,361.82	\$ c. 965.48	\$ c. 3,134.84	\$ c. 5,270.86	\$ c. 2,510.07	\$ c. 2,500.63
5,923.53	1,288.55	445.92	607.21	926.81	3,574.09	1,097.96	1,162.60
2,607.18	2,592.40	7,221.43	11,924.75	523.08	4,953.38	2,421.67	6,301.83
729.67							152.00
2,620.00	1,102.50	610.00	495.00	1,500.00	2,527.00	960.00	1,007.39
						2,284.91	
22.23		28.86	252.49				19.97
20,643.95	7,283.58	9,668.03	14,244.93	6,084.73	16,325.33	9,274.61	11,144.42
9,664.18	3,240.87	7,537.56	11,322.23	2,578.76	7,697.88	6,224.63	6,398.47
1,112.25							
1,591.13	557.91	170.36	164.55	66.00	1,175.36	236.50	279.36
208.27	82.47	90.40	57.16	89.48	505.30	95.75	69.75
750.44	169.88	364.68	363.89	109.43	842.85	680.20	505.80
1,125.33	250.61	21.40		747.18	784.49	1,088.97	980.61
749.38	709.41	128.72	136.93		266.27	323.69	95.10
15,200.98	5,011.15	8,313.12	12,044.76	3,590.85	11,272.15	8,649.74	8,329.09
5,442.97	2,272.43	1,354.91	2,200.17	2,493.88	5,053.18	624.87	2,815.33
708.00	380.00	289.00	410.00	267.00	764.00	598.00	393.00
4,734.97	1,892.43	1,065.91	1,790.17	2,226.88	4,289.18	26.87	2,422.33

**STATEMENT**

**Detailed Operating Reports of Electrical Departments of**

**NIAGARA  
SYSTEM—Continued**

Municipality	Brampton	Brantford	Brantford Twp.	Brigden P.V.	Burford P.V.
Population	4,407	31,362			
<b>EARNINGS</b>					
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Domestic service.....	17,807.01	89,693.75	12,509.06	1,507.04	3,507.24
Commercial light.....	7,879.71	22,236.86	2,287.03	1,500.06	1,795.05
Commercial power.....	18,014.77	82,095.73	6,776.71	1,474.22	994.82
Municipal power.....	1,177.80	30,203.26			
Street lighting.....	4,178.67	31,241.70	3,534.32	976.66	960.00
Rural service.....					
Miscellaneous.....		.77	19.65	77.13	
<b>Total.....</b>	<b>49,057.96</b>	<b>255,472.07</b>	<b>25,126.77</b>	<b>5,535.11</b>	<b>7,257.11</b>
<b>EXPENSES</b>					
Power purchased.....	37,024.93	157,242.10	9,879.88	3,811.02	3,154.04
Substation operation.....	1.38	4,986.79			
Substation maintenance.....		817.96			
Distribution system, operation and maintenance.....	1,381.74	2,814.21	604.75	29.38	366.97
Line transformer maintenance.....	99.11	490.04			
Meter maintenance.....	3.05	1,147.79			
Consumers' premises expenses.....		532.63			
Street lighting, operation and main- tenance.....	351.68	5,515.78	334.61	51.22	128.02
Promotion of business.....		2,789.04			
Billing and collecting.....	2,215.59	5,642.00	3,290.89		
General office, salaries and expenses.	2,552.40	8,140.73	480.59	463.71	401.56
Undistributed expenses.....	73.74	6,250.13			33.57
Interest.....	724.96	21,534.09	2,587.80	244.93	665.00
Sinking fund and principal payments on debentures.....	2,638.59	16,721.00	2,086.93	661.18	228.01
<b>Total expenses.....</b>	<b>47,067.17</b>	<b>234,624.29</b>	<b>19,265.45</b>	<b>5,261.44</b>	<b>4,977.17</b>
<b>Gross surplus.....</b>	<b>1,990.79</b>	<b>20,847.78</b>	<b>5,861.32</b>	<b>273.67</b>	<b>2,279.94</b>
<b>Gross loss.....</b>					
<b>Depreciation.....</b>	<b>1,202.00</b>	<b>13,108.00</b>	<b>1,387.00</b>	<b>214.00</b>	<b>264.00</b>
<b>Net surplus.....</b>	<b>788.79</b>	<b>7,739.78</b>	<b>4,474.32</b>	<b>59.67</b>	<b>2,015.94</b>
<b>Net loss.....</b>					





## STATEMENT

## Detailed Operating Reports of Electrical Departments of

NIAGARA  
SYSTEM—Continued

Municipality Population	Dereham Twp.	Dorchester P.V.	Drayton 618	Dresden 1,456	Drumbo P.V.
EARNINGS					
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Domestic service.....		1,973.07	2,151.10	3,854.05	1,187.29
Commercial light.....		465.45	1,530.46	3,073.85	728.82
Commercial power.....		1,450.29	1,606.06	5,867.57	287.25
Municipal power.....					
Street lighting.....		416.00	1,080.00	1,690.50	504.00
Rural service.....	9,409.81				
Miscellaneous.....					1.19
Total.....	9,409.81	4,304.81	6,367.62	14,485.97	2,708.55
EXPENSES					
Power purchased.....	3,183.99	1,273.77	3,664.80	7,124.42	1,119.65
Substation operation.....					
Substation maintenance.....					
Distribution system, operation and maintenance.....	961.02	69.47	27.16	1,959.06	416.62
Line transformer maintenance.....					
Meter maintenance.....					
Consumers' premises expenses.....					
Street lighting, operation and main- tenance.....		79.03	67.40	121.19	103.69
Promotion of business.....					
Billing and collecting.....					
General office, salaries and expenses.	268.43	274.55	295.66	704.98	214.36
Undistributed expenses.....				15.33	
Interest.....	3,333.33	178.47	379.14	367.14	168.78
Sinking fund and principal payments on debentures.....	740.88	91.05	160.81	830.82	100.07
Total expenses.....	8,487.65	1,966.34	4,594.97	11,122.94	2,123.17
Gross surplus.....	922.16	2,338.47	1,772.65	3,363.03	585.38
Gross loss.....					
Depreciation.....	1,295.00	256.00	270.00	617.00	143.00
Net surplus.....		2,082.47	1,502.65	2,746.03	442.38
Net loss.....	372.84				

## " C "—Continued

## Hydro Municipalities for Year Ended December 31, 1923

Dublin P.V.	Dundas 5,100	Dunnville 3,583	Dutton 845	Elmira 2,370	Elora 1,091	Embro 463	Etobicoke Twp.
\$ c. 602.42	\$ c. 15,046.86	\$ c. 5,884.65	\$ c. 2,479.83	\$ c. 8,686.57	\$ c. 4,093.85	\$ c. 1,714.85	\$ c. 46,352.59
635.38	6,862.82	7,952.73	1,705.44	4,414.87	3,097.29	1,264.94	6,445.75
1,166.44	24,126.56	7,387.03	3,050.53	12,131.36	9,145.65	1,825.88	6,743.04
	415.56	2,865.38		228.03			
720.00	3,806.60	4,617.53	1,128.69	2,081.00	1,302.25	819.43	6,196.56
	995.85						
	227.33	322.08	45.04	150.74	303.87		263.17
3,124.24	51,481.58	29,029.40	8,409.53	27,692.57	17,942.91	5,625.10	66,001.11
2,014.25	24,781.50	12,208.52	5,417.93	15,604.71	10,017.89	3,293.66	19,929.23
	111.89						
133.93	1,836.68	1,328.20	139.72	1,656.02	1,739.33	46.68	4,667.27
	259.45						
	364.15						
69.97	647.15	213.44	177.78	185.29	151.55	82.81	755.86
	1,774.04						
147.69	2,688.02	2,997.75	1,034.18	2,025.47	1,775.21	227.73	6,048.61
	2,159.11			40.00			2,083.75
327.18	2,157.81	3,917.99	205.98	929.05	481.15	382.39	8,784.01
255.65	1,242.68	1,139.28	190.82	427.40	466.46	242.83	2,448.96
2,948.67	38,022.48	21,805.18	7,166.41	20,867.94	14,631.59	4,276.10	44,717.69
175.57	13,459.10	7,224.22	1,243.12	6,824.63	3,311.32	1,349.00	21,283.42
155.00	1,075.00	1,775.00	360.00	1,093.00	800.00	284.00	4,750.00
20.57	12,384.10	5,449.22	883.12	5,731.63	2,511.32	1,065.00	16,533.42



## STATEMENT

## Detailed Operating Reports of Electrical Departments of

NIAGARA  
SYSTEM—Continued

Municipality	Exeter	Fergus	Ford City	Forest	Galt
Population	1,507	1,762	5,113	1,422	13,332
<b>EARNINGS</b>					
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Domestic service.....	6,182.73	6,020.54	23,500.72	5,991.76	67,731.45
Commercial light.....	3,081.61	3,902.24	8,059.08	3,584.25	23,275.04
Commercial power.....	5,720.97	5,396.68	31,668.46	3,455.66	64,340.37
Municipal power.....		793.38			7,089.25
Street lighting.....	2,049.94	2,002.25	1,725.33	2,317.06	19,872.00
Rural service.....					
Miscellaneous.....	365.23			483.47	3,600.00
Total.....	17,400.48	18,115.09	64,953.59	15,832.20	185,908.11
<b>EXPENSES</b>					
Power purchased.....	10,133.06	9,681.33	46,023.23	6,155.30	120,174.20
Substation operation.....					5,061.03
Substation maintenance.....					505.52
Distribution system, operation and maintenance.....	188.45	1,952.53	5,063.31	1,923.51	3,231.42
Line transformer maintenance.....					315.45
Meter maintenance.....					363.33
Consumers' premises expenses.....					
Street lighting, operation and maintenance.....	288.64	244.32	355.67	168.55	3,270.38
Promotion of business.....					4,638.58
Billing and collecting.....					2,632.97
General office, salaries and expenses.....	2,050.00	1,019.43	3,515.77	888.58	10,914.47
Undistributed expenses.....		17.15			1,512.75
Interest.....	471.33	1,245.52	3,840.53	897.44	28,434.28
Sinking fund and principal payments on debentures.....	589.65	338.99	1,712.63	1,518.20	11,827.61
Total expenses.....	13,721.13	14,499.27	60,511.14	11,551.58	192,881.99
Gross surplus.....	3,679.35	3,615.82	4,442.45	4,280.62	
Gross loss.....					6,973.88
Depreciation.....	684.00	842.00	1,719.00	792.00	12,378.31
Net surplus.....	2,995.35	2,773.82	2,723.45	3,488.62	
Net loss.....					19,352.19

## " C "—Continued

## Hydro Municipalities for Year Ended December 31, 1923

Georgetown 2,098	Glencoe 835	Goderich 4,108	Grantham Twp.	Granton P.V.	Guelph 18,027	Hagersville 1,271
\$ c. 6,112.09 3,404.54 19,737.34 567.13 2,122.00 2,234.87 497.97	\$ c. 3,704.11 2,609.05 2,214.33 2,214.00 118.62	\$ c. 16,341.86 8,663.03 13,644.40 4,602.54 4,622.59	\$ c. 8,479.00	\$ c. 1,170.46 519.99 1,851.57 416.00	\$ c. 58,659.14 31,887.33 93,297.52 17,473.77 11,536.62 6,500.55	\$ c. 2,917.04 2,637.05 16,144.66 800.00 1.68
34,675.94	10,860.11	47,874.42	8,479.00	3,958.02	219,354.93	22,500.43
23,838.37	4,696.39	30,138.94 3,296.30	2,478.87	2,658.88	137,764.19 3,737.46	15,358.57
2,417.86	363.38	952.38 8.45 83.40	634.75	41.13	4,587.70 855.17 2,551.73	1,870.63
120.36	181.47	209.61 672.37		34.35	5,770.46 5,657.96	222.62
1,915.95	680.24	1,647.84 290.15	448.02	120.43	3,922.20 5,238.67	971.21 176.61
628.84	1,457.84	2,659.14	2,742.12	210.40	4,301.43	151.86
427.38	1,102.80	1,631.06	397.00	66.57	4,035.33	229.47
29,348.76	8,482.12	41,589.64	6,700.76	3,131.76	178,422.30	18,980.97
5,327.18	2,377.99	6,284.78	1,778.24	826.26	40,932.63	3,519.46
1,525.00	491.00	2,960.00	1,021.20	143.00	9,661.00	454.00
3,802.18	1,886.99	3,324.78	757.04	683.26	31,271.63	3,065.46

## STATEMENT

## Detailed Operating Reports of Electrical Departments of

NIAGARA  
SYSTEM—Continued

Municipality	Hamilton	Harriston	Hensall	Hespeler	Highgate
Population	118,243	1,311	738	2,853	417
<b>EARNINGS</b>					
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Domestic service.....	356,342.84	3,762.07	2,591.25	9,891.17	1,185.36
Commercial light.....	94,431.49	2,633.19	1,507.49	3,506.05	930.54
Commercial power.....	277,107.52	6,659.88	1,611.38	13,876.75	2,032.28
Municipal power.....	46,358.35	597.48		835.24	
Street lighting.....	83,195.22	1,037.00	975.00	1,982.12	630.00
Rural service.....					
Miscellaneous.....	22,765.73			22.10	
Total.....	880,201.15	14,689.62	6,685.12	30,113.43	4,778.18
<b>EXPENSES</b>					
Power purchased.....	536,174.43	9,986.49	3,400.76	15,247.26	2,841.95
Substation operation.....	27,072.63			709.27	
Substation maintenance.....	1,289.60				
Distribution system, operation and maintenance.....	21,729.75	645.64	155.93	194.84	45.20
Line transformer maintenance.....	4,057.05			24.62	
Meter maintenance.....	11,816.37				
Consumers' premises expenses.....	6,535.36				
Street lighting, operation and maintenance.....	12,110.95	188.45	239.52	267.19	
Promotion of business.....	6,109.21				
Billing and collecting.....	29,851.54				
General office, salaries and expenses.....	35,885.30	591.70	737.47	3,222.42	235.21
Undistributed expenses.....	14,132.62	45.56		565.21	
Interest.....	81,055.17	464.80	623.57	1,874.49	181.07
Sinking fund and principal payments on debentures.....	52,186.17	663.98	254.81	1,863.15	100.86
Total expenses.....	840,006.15	12,586.62	5,412.06	23,968.45	3,404.29
Gross surplus.....	40,195.00	2,103.00	1,273.06	6,144.98	1,373.89
Gross loss.....					
Depreciation.....	23,113.99	506.00	345.00	1,517.00	187.00
Net surplus.....	17,081.01	1,597.00	928.06	4,627.98	1,186.89
Net loss.....					



## "C"—Continued

## Hydro Municipalities for Year Ended December 31, 1923

Ingersoll 5,253	Kitchener 22,717	Lambeth P.V. 2,429	Listowel 59,784	London 624	Louth Twp. 624	Lucan 624	Lynden P.V. 624
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
19,687.29	83,773.70	2,521.75	10,337.16	267,105.90	3,329.79	1,449.09	
9,892.68	45,887.85	613.91	5,658.00	111,888.47	1,062.78	422.70	
25,377.73	176,597.52	345.37	10,011.23	302,158.45	2,687.51	4,051.65	
1,328.30	23,387.84	992.16	3,642.00	29,673.89	1,094.33	462.00	
5,018.00	20,360.58	590.95	3,642.00	37,198.65	84.63		
1,249.02	4,602.02	21.94	29,873.32	941.17	2.84		
62,553.02	354,609.51	4,071.98	30,662.49	783,055.21	941.17	8,261.88	6,385.44
38,917.76	239,577.35	2,083.02	16,122.12	460,908.16	4,890.79	4,723.30	
1,379.75	8,307.61			17,987.48			
	2,293.78			9,914.88			
1,775.33	14,616.75	146.87	745.25	7,357.05	119.06	772.05	2.50
133.76	948.70			4,162.72			
320.06	2,255.02			16,309.69			
				5,195.27			
1,185.93	8,180.30	101.88	568.06	6,430.87	92.85	16.97	
	365.08			6,479.21			
1,602.42	6,320.17			18,763.95			
1,968.85	6,347.90	172.89	3,885.72	30,152.97	59.99	857.15	169.78
2,450.15	8,834.81		22.05	22,636.21			
2,087.94	14,099.98	208.44	1,551.87	52,790.40	465.37	208.16	
1,677.35	10,077.59	71.77	2,175.39	35,298.02	58.26	391.29	89.86
53,499.30	322,225.04	2,784.87	25,070.46	694,386.88	702.68	7,004.13	5,210.57
9,053.72	32,384.47	1,287.11	5,592.03	88,668.33	238.49	1,257.75	1,174.87
2,762.00	16,100.36	195.00	1,352.00	50,448.31	90.76	390.00	152.00
6,291.72	16,284.11	1,092.11	4,240.03	38,220.02	147.73	867.75	1,022.87

## STATEMENT

## Detailed Operating Reports of Electrical Departments of

NIAGARA  
SYSTEM—Continued

Municipality Population	Markham 970	*Merlin P.V.	Merritton 2,589	Milton 1,900	Milverton 1,054
EARNINGS					
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Domestic service . . . . .	3,487.96	1,516.66	7,141.86	6,580.38	3,005.94
Commercial light . . . . .	1,236.62	918.85	1,885.15	2,824.73	2,332.29
Commercial power . . . . .	2,732.60	6,339.13	4,668.90	24,467.36	9,750.35
Municipal power . . . . .	204.54				256.34
Street lighting . . . . .	1,725.00	658.13	2,234.00	1,833.32	1,054.00
Rural service . . . . .					
Miscellaneous . . . . .				250.72	
Total . . . . .	9,386.72	9,432.77	15,929.91	35,956.51	16,398.92
EXPENSES					
Power purchased . . . . .	4,395.98	5,071.44	6,825.70	32,620.76	13,536.97
Substation operation . . . . .					
Substation maintenance . . . . .					
Distribution system, operation and maintenance . . . . .	1,167.97	456.12	3,889.14	3,160.86	438.79
Line transformer maintenance . . . . .					
Meter maintenance . . . . .					
Consumers' premises expenses . . . . .					
Street lighting, operation and main- tenance . . . . .	110.14	58.67	706.46	248.49	149.98
Promotion of business . . . . .					
Billing and collecting . . . . .					
General office, salaries and expenses . . . . .	839.91	91.74	844.30	1,505.17	781.79
Undistributed expenses . . . . .			263.58		39.86
Interest . . . . .	456.45	968.97	192.56	776.42	316.58
Sinking fund and principal payments on debentures . . . . .	666.23	231.20	598.78	985.24	396.40
Total expenses . . . . .	7,636.68	6,878.14	13,320.52	39,296.94	15,660.37
Gross surplus . . . . .	1,750.04	2,554.63	2,609.39		738.55
Gross loss . . . . .				3,340.43	
Depreciation . . . . .	361.00		630.00	398.00	445.00
Net surplus . . . . .	1,389.04	2,554.63	1,979.39		293.55
Net loss . . . . .				3,738.43	

\*Eleven months' operation.

“ C ”—Continued

Hydro Municipalities for Year Ended December 31, 1923

Mimico 4,187	Mitchell 1,699	Moorefield P.V.	Mount Brydges P.V.	Newbury 301	New Hamburg 1,401	New Toronto 2,947	Niagara Falls 15,895
\$ c. 23,008.62	\$ c. 6,298.13	\$ c. 806.16	\$ c. 1,610.92	\$ c. 751.02	\$ c. 4,799.76	\$ c. 13,350.62	\$ c. 82,424.59
3,837.91	3,512.16	622.67	591.31	529.29	2,265.63	6,176.34	30,780.07
2,558.01	5,588.28	1,502.15	889.39	899.48	8,565.03	55,700.34	43,567.84
4,153.55	800.00					10,786.58	8,589.85
3,750.20	2,123.00	475.00	468.00	920.00	2,640.00	3,918.49	19,190.10
	632.23				830.60		1,218.55
37,308.29	18,953.80	3,405.98	3,559.62	3,099.79	19,101.02	89,932.37	185,771.00
23,877.73	9,569.91	2,476.93	1,602.06	1,460.09	11,182.64	73,211.65	88,978.78
	289.98						6,071.18
4,661.34	587.42	85.12	202.65	3.91	1,957.16	5,168.46	1,789.96
							929.31
							3,729.58
691.67	279.15	106.16	81.47	13.35	103.85	547.00	2,658.16
							4,658.61
3,212.49	2,039.35	70.26	80.37	55.26	1,271.55	2,826.43	6,495.98
281.22						79.95	5,265.19
3,054.05	223.55	198.89	136.07	515.72	685.35	272.50	20,374.56
1,540.94	1,065.42	166.18	89.43	300.00	486.54	186.70	17,682.59
37,319.44	14,054.78	3,103.54	2,192.05	2,348.33	15,687.09	82,292.69	158,633.90
	4,899.02	302.44	1,367.57	751.46	3,413.93	7,639.68	17,137.10
11.15							
2,151.00	1,607.00	108.00	160.00	172.00	397.00	1,766.00	11,637.00
	3,292.02	194.44	1,207.57	579.46	3,016.93	5,873.68	15,500.10
2,162.15							



## STATEMENT

## Detailed Operating Reports of Electrical Departments of

**NIAGARA  
SYSTEM—Continued**

Municipality Population	Niagara-on- the-Lake 1,714	Norwich 1,307	Oil Springs 491	Otterville P.V.	Palmerston 1,780
<b>EARNINGS</b>					
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Domestic service.....	5,842.89	5,986.24	972.72	1,529.99	5,671.62
Commercial light.....	2,505.01	2,756.49	644.31	718.74	3,681.80
Commercial power.....	653.65	1,888.11	12,635.26	1,350.81	4,958.78
Municipal power.....	1,735.77	1,179.41	.....	78.79	1,473.78
Street lighting.....	2,525.16	2,077.25	687.96	325.00	2,035.00
Rural service.....	.....	11,913.97	.....	.....	.....
Miscellaneous.....	.....	.....	245.00	.....	173.18
Total.....	13,262.48	25,801.47	15,185.25	4,003.33	17,994.16
<b>EXPENSES</b>					
Power purchased.....	4,814.78	10,591.46	8,372.37	1,967.91	9,607.05
Substation operation.....	.....	.....	.....	.....	.....
Substation maintenance.....	.....	.....	.....	.....	.....
Distribution system, operation and maintenance.....	2,354.17	1,913.07	1,618.67	135.48	335.99
Line transformer maintenance.....	.....	398.04	.....	.....	.....
Meter maintenance.....	.....	143.46	.....	.....	.....
Consumers' premises expenses.....	.....	.....	.....	.....	.....
Street lighting, operation and main- tenance.....	385.91	394.16	.....	33.28	167.72
Promotion of business.....	.....	.....	.....	.....	.....
Billing and collecting.....	.....	.....	.....	.....	.....
General office, salaries and expenses.	1,372.80	1,230.75	328.17	538.53	1,726.33
Undistributed expenses.....	.....	5,757.21	50.00	.....	194.99
Interest.....	382.56	190.05	1,256.83	84.63	.....
Sinking fund and principal payments on debentures.....	1,137.68	347.06	244.36	183.94	1,513.04
Total expenses.....	10,447.90	20,965.26	11,870.40	2,943.77	13,545.12
Gross surplus.....	2,814.58	4,836.21	3,314.85	1,059.56	4,449.04
Gross loss.....	.....	.....	.....	.....	.....
Depreciation.....	527.00	1,770.00	470.00	191.00	723.00
Net surplus.....	2,287.58	3,066.21	2,844.85	868.56	3,726.04
Net loss.....	.....	.....	.....	.....	.....

## " C "—Continued

## Hydro Municipalities for Year Ended December 31, 1923

Paris 4,400	Parkhill 1,201	Petrolia 2,911	Plattsville P.V.	Point Edward P.V.	Port Colborne 3,123	Port Credit 1,119	Port Dalhousie 1,424
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
14,594.85	3,437.57	7,555.96	1,585.59	3,348.43	11,719.01	5,294.45	7,401.61
5,202.93	2,028.44	5,170.26	915.67	1,332.94	5,524.34	1,781.95	1,851.11
14,633.96	1,523.46	23,303.44	330.98	4,906.53	3,265.74	1,097.15	2,318.60
1,225.00	503.75	6,648.95	.....	.....	933.99	246.32	.....
6,095.25	1,372.09	3,375.00	576.00	878.75	3,045.17	1,122.00	1,442.00
.....	.....	.....	.....	.....	.....	.....	921.87
749.81	.....	1,032.87	.....	.....	1,562.56	.....	.....
42,501.80	8,865.31	47,086.48	3,408.24	10,466.65	26,050.81	9,541.87	13,935.19
26,586.60	4,362.96	27,393.26	2,622.97	5,555.30	12,242.79	5,715.72	5,712.90
1,039.64	.....	.....	.....	.....	.....	.....	.....
1,753.44	58.84	1,313.83	10.75	246.32	759.98	207.14	2,184.70
145.80	.....	209.82	.....	117.51	.....	.....	.....
86.07	.....	282.56	.....	103.48	.....	.....	.....
514.66	33.28	437.00	53.00	168.76	413.72	76.79	170.92
362.94	.....	.....	.....	.....	.....	.....	.....
690.05	474.36	3,605.61	140.52	665.00	3,239.69	894.17	625.49
664.62	.....	1,200.88	.....	.....	343.00	.....	.....
2,139.53	747.69	2,066.88	281.81	456.73	3,572.47	161.43	1,099.45
4,544.85	411.84	1,281.32	116.47	286.10	1,692.83	193.10	835.84
38,528.20	6,088.97	37,791.16	3,225.52	7,599.20	22,264.48	7,248.35	10,629.30
3,973.60	2,776.34	9,295.32	182.72	2,867.45	3,786.33	2,293.52	3,305.89
3,193.00	417.00	1,737.00	169.00	430.00	1,268.00	605.00	470.00
780.60	2,359.34	7,558.32	13.72	2,437.45	2,518.33	1,688.52	2,835.89

## STATEMENT

## Detailed Operating Reports of Electrical Departments of

**NIAGARA  
SYSTEM—Continued**

Municipality Population	Port Dover 1,380	Port Stanley 717	Preston 5,547	Princeton P.V.	Queenston P.V.
<b>EARNINGS</b>					
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Domestic service.....	3,590.29	7,460.33	24,540.48	1,751.92	1,443.69
Commercial light.....	2,551.59	2,110.89	11,579.10	425.60	154.90
Commercial power.....	493.51	3,247.89	41,981.43		579.52
Municipal power.....	445.15	685.52	936.00		
Street lighting.....	2,644.50	2,036.70	5,173.24	420.00	630.00
Rural service.....					
Miscellaneous.....		3.50	205.17		38.83
Total.....	9,725.04	15,544.83	84,415.42	2,597.52	2,846.94
<b>EXPENSES</b>					
Power purchased.....	4,030.54	8,736.04	52,542.42	1,441.72	875.53
Substation operation.....			4,108.58		
Substation maintenance.....			1,004.76		
Distribution system, operation and maintenance.....	303.59	891.81	3,228.37	33.50	30.58
Line transformer maintenance.....			305.26		
Meter maintenance.....			596.42		
Consumers' premises expenses.....					
Street lighting, operation and main- tenance.....	74.81	518.25	791.06	64.16	28.37
Promotion of business.....					
Billing and collecting.....			1,083.30		
General office, salaries and expenses.....	305.81	2,016.98	1,395.94	26.26	209.82
Undistributed expenses.....			1,554.27		
Interest.....	1,601.51	705.27	4,885.54	179.48	602.27
Sinking fund and principal payments on debentures.....	641.43	504.27	4,817.80	78.94	230.53
Total expenses.....	6,957.69	13,372.62	76,313.72	1,824.06	1,977.10
Gross surplus.....	2,767.35	2,172.21	8,101.70	773.46	869.84
Gross loss.....					
Depreciation.....	647.00	846.00	4,558.00	111.00	178.00
Net surplus.....	2,120.35	1,326.21	3,543.70	662.46	691.84
Net loss.....					



## " C "—Continued

## Hydro Municipalities for Year Ended December 31, 1923

Ridgetown 2,267	Riverside 3,000	Rockwood P.V.	Rodney 756	St. Catharines 20,961	St. Clair Beach 82	St. George P.V.	St. Jacobs P.V.
\$ c. 5,138.35	\$ c. 14,832.01	\$ c. 1,835.72	\$ c. 2,005.79	\$ c. 77,332.47	\$ c. 719.63	\$ c. 1,729.11	\$ c. 1,576.05
3,501.55	1,430.38	508.88	1,373.87	15,293.23	1,836.97	764.20	600.18
5,223.91	1,490.49	1,332.84	1,933.14	77,224.26	316.19	2,383.66	147.82
833.31							
2,411.18	1,080.00	821.51	1,061.37	21,110.18		350.00	480.00
1,202.28		38.16		1,117.61			
18,310.58	18,832.88	4,537.11	6,374.17	192,077.75	2,872.79	5,226.97	2,804.05
9,263.44	9,114.80	3,049.18	2,833.33	100,783.74	1,605.36	3,113.32	1,631.70
				3,232.09			
				982.10			
1,665.62	2,010.11	48.10	181.48	13,105.31	178.17	102.76	58.43
				1,101.04			
				2,510.85			
206.06	491.10	147.66	118.20	3,359.22		101.65	61.68
				720.00			
				4,626.86			
731.00	1,918.70	406.64	285.64	9,074.83	133.35	425.84	318.88
362.50				4,087.10			
159.24	1,626.23	25.90	238.68	11,648.72	453.89	54.82	126.34
992.34	809.31		161.79	6,645.55	169.65	127.10	224.92
13,380.20	15,970.25	3,677.48	3,819.12	161,877.41	2,540.42	3,925.49	2,421.95
4,930.38	2,862.63	859.63	2,555.05	30,200.34	332.37	1,301.48	382.10
720.00	862.00	89.40	288.00	10,212.00	135.00	187.00	188.00
4,210.38	2,000.63	770.23	2,267.05	19,988.34	197.37	1,114.48	194.10

## STATEMENT

## Detailed Operating Reports of Electrical Departments of

NIAGARA  
SYSTEM—Continued

Municipality	St. Marys	St. Thomas	Sarnia	Scarboro Twp.	Seaforth
Population	4,039	17,892	14,905		1,950
<b>EARNINGS</b>					
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Domestic service.....	16,151.56	56,710.63	69,562.83	40,972.43	7,854.34
Commercial light.....	6,372.72	27,924.54	31,650.47	5,163.61	3,879.71
Commercial power.....	15,226.72	61,783.59	99,326.62	6,481.65	6,622.57
Municipal power.....	1,586.14	12,168.10		4,333.24	
Street lighting.....	4,040.00	14,595.04	12,076.58	3,600.77	1,722.00
Rural service.....		4,750.25			
Miscellaneous.....	155.79	3,172.91	3,207.04		8.95
Total.....	43,532.93	181,105.06	215,823.54	60,551.70	20,087.57
<b>EXPENSES</b>					
Power purchased.....	26,581.86	96,459.12	125,148.47	17,671.33	15,834.02
Substation operation.....	1,359.43	5,941.42	5,483.65		
Substation maintenance.....		610.86	528.96		
Distribution system, operation and maintenance.....	1,258.34	5,554.80	7,764.18	7,296.59	1,543.80
Line transformer maintenance.....	89.66	300.05	489.55		
Meter maintenance.....	420.58	531.31	2,579.49		
Consumers' premises expenses.....		181.03			
Street lighting, operation and main- tenance.....	390.52	3,942.85	3,495.36	348.91	279.34
Promotion of business.....		737.59			
Billing and collecting.....	466.08	5,294.08	3,627.49		
General office, salaries and expenses.	1,921.66	6,310.57	8,127.46	3,801.18	1,249.93
Undistributed expenses.....	1,228.23	14,570.04	8,143.55	200.00	
Interest.....	2,519.55	4,125.94	14,902.56	8,812.38	436.27
Sinking fund and principal payments on debentures.....	2,739.44	5,354.87	10,498.58	3,411.26	445.75
Total expenses.....	38,975.35	149,914.53	190,789.30	41,541.65	19,789.11
Gross surplus.....	4,557.58	31,190.53	25,034.24	19,010.05	298.46
Gross loss.....					
Depreciation.....	3,057.00	9,642.00	10,042.00	3,375.00	597.00
Net surplus.....	1,500.58	21,548.53	14,992.24	15,635.05	
Net loss.....					298.54

\*Two months' operation.

†Three months' operation.

### “ C ”—Continued

### Hydro Municipalities for Year Ended December 31, 1923

Simcoe	Springfield	Stamford Twp.	*Stouffville	Stratford	Strathroy	†Sutton
3,951	432		1,115	17,611	2,627	847
\$ c. 4,973.09	\$ c. 1,389.91	\$ c. 18,250.90	\$ c. 454.12	\$ c. 86,303.19	\$ c. 10,366.64	\$ c. 622.22
6,398.76	651.05	1,022.41	329.49	26,090.64	5,985.14	217.53
7,438.18	666.82	10,171.53	43.42	25,519.47	12,460.15	65.31
997.10				5,521.73	1,187.78	
3,166.50	800.00	3,986.66	488.75	17,297.17	3,205.66	483.00
		484.74		5,211.20		
				3,799.86	257.81	
22,973.63	3,507.78	33,916.24	1,315.78	169,743.26	33,463.18	1,388.05
12,870.90	1,785.41	12,037.05	773.42	132,724.25	17,544.53	1,043.58
171.49				4,127.90		
				572.46		
1,452.11	92.47	1,811.92	189.10	5,464.22	1,033.53	61.32
276.35				350.65		
19.50				1,438.94		
425.85	32.93	471.09	13.95	4,889.55	673.59	74.60
923.49	262.99	4,764.55	109.41	3,763.11		
65.25		1,589.71		4,596.90	3,777.40	176.08
1,597.76	111.57	4,170.74		2,085.07	1,099.29	230.20
847.48	532.71	2,436.34		15,868.45		
				9,122.36	1,759.56	
18,650.18	2,818.08	27,281.40	1,085.88	185,003.86	25,887.90	1,585.78
4,323.45	689.70	6,634.84	229.90		7,575.28	
				15,260.60		197.73
1,356.00		2,191.00		13,170.00	1,821.00	
2,967.45	689.70	4,443.84	229.90		5,754.28	
				28,430.60		197.73



## STATEMENT

## Detailed Operating Reports of Electrical Departments of

**NIAGARA  
SYSTEM—Continued**

Municipality	Tavistock	Tecumseh	Thamesford P.V.	Thamesville	Thedford
Population	1,003	1,019		817	583
<b>EARNINGS</b>					
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Domestic service.....	3,609.74	6,184.85	1,345.98	3,013.98	2,038.83
Commercial light.....	1,323.87	1,833.70	1,212.44	2,264.50	1,406.69
Commercial power.....	2,349.94	150.04	3,976.75	3,081.16	1,017.24
Municipal power.....	394.68				
Street lighting.....	1,338.62	236.00	510.00	924.00	1,950.00
Rural service.....					
Miscellaneous.....	580.53		2.20		
<b>Total.....</b>	<b>9,597.38</b>	<b>8,404.59</b>	<b>7,047.37</b>	<b>9,283.64</b>	<b>6,412.76</b>
<b>EXPENSES</b>					
Power purchased.....	7,995.54	3,748.16	4,237.52	3,705.51	3,012.00
Substation operation.....					
Substation maintenance.....					
Distribution system, operation and maintenance.....	1,121.16	1,500.06	83.41	271.03	259.21
Line transformer maintenance.....					
Meter maintenance.....					
Consumers' premises expenses.....					
Street lighting, operation and main- tenance.....	127.05	154.35	66.06	85.45	55.71
Promotion of business.....					
Billing and collecting.....					
General office, salaries and expenses.....	289.94	1,348.20	274.21	506.80	237.30
Undistributed expenses.....	3.74		1.90		
Interest.....	269.29	1,283.17	143.54	312.03	821.48
Sinking fund and principal payments on debentures.....	121.02	697.76	253.73	353.65	475.46
<b>Total expenses.....</b>	<b>9,927.74</b>	<b>8,731.70</b>	<b>5,060.37</b>	<b>5,234.47</b>	<b>4,861.16</b>
<b>Gross surplus.....</b>			<b>1,987.00</b>	<b>4,049.17</b>	<b>1,551.60</b>
<b>Gross loss.....</b>	<b>330.36</b>	<b>327.11</b>			
<b>Depreciation.....</b>	<b>393.00</b>	<b>564.00</b>	<b>274.00</b>	<b>384.00</b>	<b>221.00</b>
<b>Net surplus.....</b>			<b>1,713.00</b>	<b>3,665.17</b>	<b>1,330.60</b>
<b>Net loss.....</b>	<b>723.36</b>	<b>891.11</b>			

## “ C ”—Continued

## Hydro Municipalities for Year Ended December 31, 1923

Thorndale P.V.	Thorold 5,243	Tilbury 1,851	Tillsonburg 3,027	Toronto 522,942	Toronto Twp.	Vaughan Twp.
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
1,198.22	13,781.50	4,551.36	8,947.95	1,817,880.36		1,677.29
711.94	5,453.59	4,461.85	7,538.05	1,776,961.73		385.28
1,429.26	3,476.54	8,356.61	13,045.34	2,296,896.33		3,149.36
.....	2,122.00	443.11	.....	772,049.38		.....
468.24	3,131.00	1,013.32	2,925.35	400,889.62	170.50	238.00
.....	.....	.....	.....	.....	48,665.66	2,375.89
.....	21.16	.....	540.59	188,594.43	.....	.....
3,807.66	27,985.79	18,826.25	32,997.28	7,253,271.85	48,836.16	7,825.82
2,815.79	11,577.19	8,194.46	16,991.51	3,134,723.10	12,696.23	1,709.28
.....	3,331.89	.....	1,240.64	252,793.55	.....	.....
.....	.....	.....	.....	100,060.58	.....	.....
135.34	3,258.09	119.10	704.06	242,704.25	4,907.16	328.15
.....	.....	.....	339.43	48,306.08	.....	.....
.....	.....	.....	109.32	58,488.91	.....	.....
.....	.....	.....	.....	198,988.96	.....	.....
32.87	714.39	129.92	332.61	115,044.54	25.95	53.27
.....	.....	.....	26.85	150,245.47	.....	.....
.....	.....	.....	716.66	259,173.19	.....	.....
111.46	2,065.78	1,552.67	2,589.40	489,651.19	3,875.62	190.33
.....	.....	.....	400.48	153,819.28	316.00	.....
176.78	220.37	651.89	641.11	921,394.46	4,140.35	2,400.26
141.16	379.34	377.20	1,411.57	550,427.15	2,421.16	265.08
3,413.40	21,547.05	11,025.24	25,503.64	6,675,820.71	28,382.47	4,946.37
394.26	6,438.74	7,801.01	7,493.64	577,451.14	20,453.69	2,879.45
.....	.....	.....	.....	.....	.....	.....
137.00	1,861.00	484.00	1,758.17	445,394.52	3,459.00	751.00
257.26	4,577.74	7,317.01	5,735.47	132,056.62	16,994.69	2,128.45
.....	.....	.....	.....	.....	.....	.....

## STATEMENT

## Detailed Operating Reports of Electrical Departments of

NIAGARA  
SYSTEM—Continued

Municipality	Walkerville	Wallaceburg	Wardsville	Waterdown	Waterford
Population	7,303	3,921	212	815	1,112
<b>EARNINGS</b>					
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Domestic service.....	52,043.44	12,875.61	803.19	2,585.03	3,632.90
Commercial light.....	21,187.15	6,599.17	418.46	657.78	1,151.97
Commercial power.....	147,323.71	36,576.09		1,329.07	4,302.25
Municipal power.....		1,250.80			
Street lighting.....	6,519.67	2,745.35	870.00	711.67	1,219.57
Rural service.....				5,334.37	1,114.73
Miscellaneous.....	3,201.79	47.91			194.45
Total.....	230,275.76	60,094.93	2,091.65	10,617.92	11,615.87
<b>EXPENSES</b>					
Power purchased.....	145,618.19	33,106.79	918.26	5,641.58	6,143.86
Substation operation.....	7,787.20				
Substation maintenance.....	493.35	87.05			
Distribution system, operation and maintenance.....	3,367.61	1,305.33	4.08	1,061.48	526.15
Line transformer maintenance.....	1,820.11	260.67			
Meter maintenance.....	3,094.16	567.69			
Consumers' premises expenses.....					
Street lighting, operation and maintenance.....	2,610.40	1,359.19	45.63	14.00	148.27
Promotion of business.....					
Billing and collecting.....					
General office, salaries and expenses.....	13,421.28	5,247.05	101.15	760.74	910.73
Undistributed expenses.....	12,207.01	1,149.01			609.16
Interest.....	12,203.37	1,726.14	388.75	1,013.02	
Sinking fund and principal payments on debentures.....	8,973.76	955.06	230.53	491.43	
Total expenses.....	211,596.44	45,763.98	1,688.40	8,982.25	8,338.17
Gross surplus.....	18,679.32	14,330.95	403.25	1,635.67	3,277.70
Gross loss.....					
Depreciation.....	7,934.00	1,890.00	126.00	977.00	596.00
Net surplus.....	10,745.32	12,440.95	277.25	658.67	2,681.70
Net loss.....					



## " C "—Continued

## Hydro Municipalities for Year Ended December 31, 1923

Waterloo 5,976	Watford 1,039	Welland 8,880	Wellesley P.V.	West Lorne 803	Weston 3,299	Windsor 38,530	Woodbridge 679
\$ c. 24,528.74	\$ c. 3,740.23	\$ c. 26,285.40	\$ c. 1,363.47	\$ c. 1,828.90	\$ c. 21,369.90	\$ c. 300,312.99	\$ c. 1,992.80
9,101.69	2,856.12	7,698.72	820.60	1,662.45	3,375.89	123,631.38	1,083.35
37,352.06	2,727.08	31,693.68	4,790.83	7,192.16	34,173.09	227,595.34	4,252.07
4,188.41	284.20	.....	.....	2,379.73	18,564.49	.....	165.45
6,791.64	1,365.00	7,973.76	871.25	1,046.50	8,012.75	58,396.21	847.00
.....	.....	.....	.....	.....	.....	.....	79.34
843.93	.....	97.79	.....	.....	190.75	10,800.47	35.58
82,806.47	10,972.63	73,749.35	7,846.15	11,730.01	69,502.11	739,300.88	8,455.59
46,640.40	4,176.27	47,141.58	5,950.70	8,278.26	47,309.20	367,561.53	5,536.29
2,686.62	.....	3,669.50	.....	.....	.....	32,422.23	.....
.....	.....	37.57	.....	.....	.....	8,094.41	.....
2,413.86	303.02	1,880.27	157.93	277.68	5,673.14	23,473.04	474.72
1.00	.....	175.50	.....	.....	.....	2,767.52	.....
625.88	.....	348.87	.....	.....	.....	3,479.73	.....
.....	.....	.....	.....	.....	.....	6,952.18	.....
1,602.34	148.96	752.88	69.17	144.98	1,462.12	29,236.75	217.54
.....	.....	.....	.....	.....	.....	3,225.13	.....
2,027.74	.....	2,481.04	.....	.....	.....	20,244.72	.....
5,796.70	589.81	5,379.97	368.00	565.14	2,728.38	22,145.47	389.18
506.60	.....	3,102.82	.....	.....	.....	20,317.67	.....
5,278.04	384.62	15,879.10	318.71	130.92	2,768.45	56,789.71	182.70
3,010.57	417.19	5,210.88	289.21	143.53	1,141.74	29,273.26	170.70
70,589.75	6,019.87	86,059.98	7,153.72	9,540.51	61,083.03	625,983.35	6,971.13
12,216.72	4,952.76	.....	692.43	2,189.50	8,419.08	113,317.53	1,484.46
.....	.....	12,310.63	.....	.....	.....	.....	.....
5,292.00	400.00	6,760.00	245.00	315.00	3,004.00	24,427.00	420.00
6,924.72	4,552.76	.....	447.43	1,874.50	5,415.08	88,890.53	1,064.46
.....	.....	19,070.63	.....	.....	.....	.....	.....

## STATEMENT

## Detailed Operating Reports of Electrical Departments of

NIAGARA  
SYSTEM—Continued

Municipality Population	Woodstock 10,164	Wyoming 489	Zurich P.V.	NIAGARA SYSTEM SUMMARY
<b>EARNINGS</b>				
	\$ c.	\$ c.	\$ c.	\$ c.
Domestic service.....	40,323.84	1,787.90	1,327.15	4,351,555.82
Commercial light.....	20,615.27	1,164.22	1,125.33	2,769,419.14
Commercial power.....	37,603.82	372.61	2,123.87	4,952,862.02
Municipal power.....	2,688.71			1,046,361.28
Street lighting.....	6,779.50	1,000.00	790.00	998,572.72
Rural service.....				110,032.77
Miscellaneous.....	1,308.92			300,309.30
Total.....	109,320.06	4,324.73	5,366.35	14,529,113.05
<b>EXPENSES</b>				
Power purchased.....	68,322.41	2,305.28	3,584.28	7,331,251.25
Substation operation.....	2,347.67			419,342.86
Substation maintenance.....				128,883.24
Distribution system, operation and maintenance.....	4,188.76	113.77		499,637.14
Line transformer maintenance.....				69,976.97
Meter maintenance.....	514.71			115,326.45
Consumers' premises expenses.....				218,682.02
Street lighting, operation and main- tenance.....	1,503.81	49.37	95.85	242,616.51
Promotion of business.....				175,441.16
Billing and collecting.....	3,419.40			396,331.91
General office, salaries and expenses.....	4,116.42	248.24	331.70	823,004.08
Undistributed expenses.....	2,489.36			314,701.43
Interest.....	4,644.46	504.09	41.39	1,429,554.88
Sinking fund and principal payments on debentures.....	1,236.99	416.97	102.15	871,323.86
Total expenses.....	92,783.99	3,637.72	4,155.37	13,036,073.76
Gross surplus.....	16,536.07	687.01	1,210.98	1,493,039.29
Gross loss.....				
Depreciation.....	7,046.00	255.00	179.00	786,890.02
Net surplus.....	9,490.07	432.01	1,031.98	706,149.27
Net loss.....				

## " C "—Continued

## Hydro Municipalities for Year Ended December 31, 1923

SEVERN  
SYSTEM

Alliston	Barrie	Beeton	Bradford	Coldwater	Collingwood	Cookstown P.V.	Creemore
1,321	6,888	586	1,028	647	6,237		540
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
5,951.34	24,779.83	2,369.07	3,986.23	2,034.86	19,139.43	2,024.44	1,859.32
3,295.53	10,564.19	1,445.83	2,477.31	1,460.25	8,457.52	811.29	1,406.94
1,357.24	10,528.02	3,037.04	1,846.28	2,841.27	31,337.89	53.20	1,747.29
559.04					1,649.51		
1,998.00	3,995.27	992.00	1,474.20	540.00	3,881.08	1,120.00	610.96
	19.39						
138.00	3,834.04	2.52			1,053.14		
13,299.15	53,720.74	7,846.46	9,784.02	6,876.38	65,518.57	4,008.93	5,624.51
6,854.29	28,834.66	5,672.01	5,894.29	2,646.78	40,812.58	1,957.54	3,675.32
	324.69				42.31		
					40.98		
904.92	2,684.32	101.45	392.90	513.86	1,217.85	200.90	66.24
	122.47				216.50		
	382.52				37.48		
204.51	1,462.23	57.77	76.74	31.95	321.09	46.60	42.49
					1,902.34		
811.83	4,307.31	360.65	316.98	162.53	3,304.33	145.32	417.67
	973.62				199.28		
1,965.15	1,307.87	814.49	1,438.27	295.55		780.90	68.69
859.07	2,169.06	274.43	330.20	156.47	1,728.94	454.17	281.62
11,599.77	42,568.75	7,280.80	8,449.38	3,807.14	49,823.68	3,585.43	4,552.03
1,699.38	11,151.99	565.66	1,334.64	3,069.24	15,694.89	423.50	1,072.48
846.00	1,092.00	367.00	479.00	378.00	2,932.00	317.00	257.00
853.38	10,059.99	198.66	855.64	2,691.24	12,762.89	106.50	815.48



## STATEMENT

## Detailed Operating Reports of Electrical Departments of

SEVERN  
SYSTEM—Continued

Municipality Population	Elmvale P.V.	Midland 7,022	Penetang 3,920	Port McNicol 576
EARNINGS				
	\$ c.	\$ c.	\$ c.	\$ c.
Domestic service.....	1,518.13	22,525.81	7,858.45	1,769.16
Commercial light.....	1,476.20	9,848.44	4,003.70	1,095.31
Commercial power.....	4,129.47	36,590.63	15,177.84	80.81
Municipal power.....		2,876.11	2,358.83	
Street lighting.....	770.00	3,910.00	1,850.00	494.00
Rural service.....				
Miscellaneous.....			56.05	4.12
Total.....	7,893.80	75,750.99	31,304.87	3,443.40
EXPENSES				
Power purchased.....	4,719.86	38,679.92	15,913.78	1,216.32
Substation operation.....		1,969.99	1,931.88	
Substation maintenance.....		98.68		
Distribution system, operation and maintenance.....	551.94	1,579.05	373.55	250.38
Line transformer maintenance.....		564.06	173.77	
Meter maintenance.....		472.72	23.39	
Consumers' premises expenses.....				
Street lighting, operation and main- tenance.....	56.05	589.27	572.87	80.21
Promotion of business.....		658.75	320.50	
Billing and collecting.....		3,190.98	3,344.05	79.36
General office, salaries and expenses.	283.70	1,156.50		
Undistributed expenses.....		3,242.08	1,476.33	372.75
Interest.....	123.66			
Sinking fund and principal payments on debentures.....	171.62	3,484.55	1,234.38	267.47
Total expenses.....	5,906.83	55,686.55	25,364.50	2,266.49
Gross surplus.....	1,986.97	20,064.44	5,940.37	1,176.91
Gross loss.....				
Depreciation.....	374.00	4,187.00	836.00	216.00
Net surplus.....	1,612.97	15,877.44	5,104.37	960.91
Net loss.....				

## “ C ”—Continued

## Hydro Municipalities for Year Ended December 31, 1923

Stayner 1,004	Thornton P.V.	Tottenham 512	Victoria Harbour 1,485	Waubashene P.V.	SEVERN SYSTEM SUMMARY
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
3,169.66	879.09	2,572.00	2,103.49	1,315.55	105,855.86
1,805.88	259.09	1,317.92	1,434.96	483.29	51,643.65
2,830.60		665.93		270.17	112,493.68
					7,443.49
893.00	840.00	1,225.00	693.00	380.00	25,666.51
					19.39
					5,087.87
8,699.14	1,978.18	5,780.85	4,231.45	2,449.01	308,210.45
4,199.20	1,181.82	3,721.08	1,837.13	1,020.19	168,836.77
					3,944.18
					464.35
481.79		308.18	158.42	48.60	9,834.35
					1,076.80
					916.11
99.84	15.97	25.61	34.18	33.28	3,750.66
					2,881.59
352.95	103.49	208.66	340.04	292.98	18,022.83
12.84					2,342.24
336.17	491.67	756.76	217.41	141.88	13,829.63
606.16	237.35	172.89	271.17	143.07	12,842.62
6,088.95	2,030.30	5,193.18	2,858.35	1,680.00	238,742.13
2,610.19		587.67	1,373.10	769.01	69,468.32
	52.12				
468.00	187.00	269.00	232.00	131.00	13,568.00
2,142.19		318.67	1,141.10	638.01	55,900.32
	239.12				

## STATEMENT

## Detailed Operating Reports of Electrical Departments of

EUGENIA  
SYSTEM

Municipality	Arthur	Chatsworth	Chesley	Dundalk	Durham
Population	1,222	287	1,803	725	1,622
<b>EARNINGS</b>					
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Domestic service.....	3,104.17	1,163.89	6,036.92	1,951.86	4,592.86
Commercial light.....	3,044.35	743.79	4,201.13	1,764.69	3,200.58
Commercial power.....	3,990.58	611.70	7,503.74	2,829.70	13,672.42
Municipal power.....			1,377.59		
Street lighting.....	1,866.76	697.00	1,686.28	864.00	1,443.82
Rural service.....			165.99		
Miscellaneous.....			81.05		
Total.....	12,005.86	3,216.38	21,052.70	7,410.25	22,909.68
<b>EXPENSES</b>					
Power purchased.....	9,204.66	1,531.25	13,721.78	4,391.12	12,258.65
Substation operation.....					
Substation maintenance.....					
Distribution system, operation and maintenance.....	202.62	27.55	860.26	142.82	230.56
Line transformer maintenance.....					
Meter maintenance.....					
Consumers' premises expenses.....					
Street lighting, operation and maintenance.....	215.07	60.21	130.17	72.86	172.61
Promotion of business.....					
Billing and collecting.....					
General office, salaries and expenses.....	511.41	180.37	883.52	360.84	1,247.89
Undistributed expenses.....			80.95		255.11
Interest.....	1,683.31	310.94	1,194.14	83.09	1,094.97
Sinking fund and principal payments on debentures.....	359.53	180.37	1,115.12	208.60	1,351.47
Total expenses.....	12,176.60	2,290.69	17,985.94	5,259.33	16,611.26
Gross surplus.....		925.69	3,066.76	2,150.92	6,298.42
Gross loss.....	170.74				
Depreciation.....	628.00	152.00	765.00	265.00	690.00
Net surplus.....		773.69	2,301.76	1,885.92	5,608.42
Net loss.....	798.74				



## “ C ”—Continued

## Hydro Municipalities for Year Ended December 31, 1923

Elmwood P.V.	Flesherton 410	Grand Valley 582	Hanover 2,695	Holstein P.V.	Kincardine 2,159	Lucknow 887	Markdale 908
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
693.42	1,311.25	2,599.23	11,073.20	686.19	8,953.34	3,135.27	2,516.70
463.03	1,145.06	2,322.94	5,016.69	672.39	4,829.19	2,605.21	1,872.20
1,329.93	424.53	2,042.86	46,729.25	154.63	6,007.67	1,878.04	928.68
.....	.....	.....	317.15	.....	1,534.42	.....	.....
485.00	736.00	938.00	2,991.84	490.08	3,521.00	1,568.00	896.26
.....	343.70	.....	46.84	.....	.....	.....	216.74
.....	.....	7.66	.....	.....	371.65	.....	.....
2,971.38	3,960.54	7,910.69	66,174.97	2,003.29	25,217.27	9,186.52	6,430.58
1,611.75	2,407.05	5,120.19	46,917.71	1,463.18	12,973.87	5,804.45	3,306.31
.....	.....	.....	.....	.....	.....	.....	.....
5.92	42.02	75.53	4,477.69	21.62	1,019.13	159.47	211.01
.....	.....	.....	.....	.....	.....	.....	.....
27.32	109.17	78.70	399.58	15.99	544.45	69.12	128.59
.....	.....	.....	.....	.....	.....	.....	.....
184.51	209.46	259.10	1,896.30	157.29	2,963.32	424.17	626.11
.....	.....	.....	385.03	.....	103.00	.....	.....
369.51	471.17	377.85	5,304.22	290.76	3,540.04	1,089.25	557.35
261.44	191.06	424.18	2,891.97	125.15	1,935.36	551.14	171.15
2,460.45	3,429.93	6,335.55	62,272.50	2,073.99	23,079.17	8,097.60	5,000.52
510.93	530.61	1,575.14	3,902.47	.....	2,138.10	1,088.92	1,430.06
.....	.....	.....	.....	70.70	.....	.....	.....
160.00	223.00	323.00	2,045.00	76.00	1,144.00	402.00	413.00
350.93	307.61	1,252.14	1,857.47	.....	994.10	686.92	1,017.06
.....	.....	.....	.....	146.70	.....	.....	.....

## STATEMENT

## Detailed Operating Reports of Electrical Departments of

EUGENIA  
SYSTEM—Continued

Municipality Population	Mount Forest 1,761	Neustadt 445	Orangeville 2,503	Owen Sound 12,360	Paisley 749
<b>EARNINGS</b>					
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Domestic service.....	4,894.10	1,388.03	5,162.41	35,771.38	681.17
Commercial light.....	5,472.11	1,099.61	5,015.83	19,593.46	591.08
Commercial power.....	3,518.14	5,923.43	5,956.94	32,189.46	81.81
Municipal power.....	1,558.63		342.00		
Street lighting.....	2,754.14	975.00	3,865.40	11,015.75	456.50
Rural service.....					
Miscellaneous.....			207.23	295.12	
Total.....	18,197.12	9,386.07	20,549.81	98,865.17	1,810.56
<b>EXPENSES</b>					
Power purchased.....	10,024.61	6,861.13	12,836.51	54,185.83	1,269.58
Substation operation.....				4,982.27	
Substation maintenance.....					
Distribution system, operation and maintenance.....	989.39	67.36	1,357.47	4,830.32	76.76
Line transformer maintenance.....				38.15	
Meter maintenance.....				2,811.13	
Consumers' premises expenses.....					
Street lighting, operation and main- tenance.....	298.09	117.47	293.92	666.04	
Promotion of business.....					
Billing and collecting.....				2,432.73	
General office, salaries and expenses.	1,040.50	454.76	689.80	6,607.52	86.87
Undistributed expenses.....	92.22			1,615.49	
Interest.....	1,124.80	911.75	1,585.67	2,286.21	240.21
Sinking fund and principal payments on debentures.....	860.88	587.63	1,546.82	5,066.56	
Total expenses.....	14,430.49	9,000.10	18,310.19	85,522.25	1,673.42
Gross surplus.....	3,766.63	385.97	2,239.62	13,342.92	137.14
Gross loss.....					
Depreciation.....	890.00	383.00	925.00	4,501.66	
Net surplus.....	2,876.63	2.97	1,314.62	8,841.26	137.14
Net loss.....					

## "C"—Continued

## Hydro Municipalities for Year Ended December 31, 1923

Priceville P.V.	Ripley P.V.	Shelburne 1,101	Tara 521	Teeswater 838	Wingham 2,470	EUGENIA SYSTEM SUMMARY
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
415.95	1,509.93	4,535.60	2,074.95	2,890.60	8,068.34	115,210.76
182.67	1,742.65	3,545.17	1,573.28	2,030.58	7,663.32	80,391.01
.....	1,094.16	3,166.32	1,102.58	3,011.49	11,951.79	156,099.85
.....	.....	512.64	.....	.....	249.86	5,892.29
472.50	1,300.50	1,114.75	1,833.30	1,655.00	4,503.13	48,130.01
.....	49.50	.....	133.58	.....	.....	956.35
.....	.....	.....	.....	.....	1,559.39	2,522.10
1,071.12	5,696.74	12,874.48	6,717.69	9,587.67	33,995.83	409,202.37
695.47	4,600.03	7,332.98	3,877.59	6,585.01	18,498.64	247,479.35
.....	.....	.....	.....	.....	.....	4,982.27
20.00	40.46	52.16	161.58	197.15	3,647.15	18,916.00
.....	.....	.....	.....	.....	.....	38.15
.....	.....	.....	.....	.....	.....	2,811.13
5.00	71.82	21.99	92.24	102.79	214.17	3,907.37
.....	.....	.....	.....	.....	.....	2,432.73
25.00	340.03	788.05	396.21	250.91	1,246.49	21,830.43
.....	.....	.....	.....	.....	36.00	2,567.80
470.64	855.26	826.68	940.24	1,764.15	3,830.50	31,202.71
205.35	189.73	803.77	551.94	1,103.22	2,820.84	23,503.28
1,421.46	6,097.33	9,825.63	6,019.80	10,003.23	30,293.79	359,671.22
.....	.....	3,048.85	697.89	.....	3,702.04	49,531.15
350.34	400.59	.....	.....	415.56	.....	.....
134.00	260.00	581.00	349.00	410.00	1,698.00	17,417.66
.....	.....	2,467.85	348.89	.....	2,004.04	32,113.49
484.34	660.59	.....	.....	825.56	.....	.....



## STATEMENT

## Detailed Operating Reports of Electrical Departments of

WASDELLS  
SYSTEM

Municipality Population	Beaverton 986	Brechlin P.V.	Cannington 951	Kirkfield P.V.	Port Perry 1,162
EARNINGS					
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Domestic service.....	4,420.22	955.78	4,265.22	450.84	5,722.85
Commercial light.....	2,291.72	841.46	2,380.92	925.77	3,270.27
Commercial power.....	4,608.61	1,201.16	1,148.35	514.85	735.45
Municipal power.....					
Street lighting.....	1,088.34	224.43	1,257.00	414.76	2,189.00
Rural service.....	2,129.19		441.83		
Miscellaneous.....		150.00			
Total.....	14,538.08	3,372.83	9,493.32	2,306.22	11,917.57
EXPENSES					
Power purchased.....	6,534.11	2,421.50	4,777.73	1,444.50	5,266.79
Substation operation.....					
Substation maintenance.....					
Distribution system, operation and maintenance.....	1,092.13	249.86	1,223.39	107.62	402.74
Line transformer maintenance.....					
Meter maintenance.....					
Consumers' premises expenses.....					
Street lighting, operation and main- tenance.....	42.77	31.94	89.28	31.94	3.20
Promotion of business.....					
Billing and collecting.....					
General office, salaries and expenses.	329.49	86.44	320.43	13.52	409.46
Undistributed expenses.....			66.71		
Interest.....	1,088.54	373.00	882.38	376.21	962.83
Sinking fund and principal payments on debentures.....	333.50	58.23	351.42	183.26	
Total expenses.....	9,420.54	3,220.97	7,711.34	2,157.05	7,045.02
Gross surplus.....	5,117.44	151.86	1,781.98	149.17	4,872.55
Gross loss.....					
Depreciation.....	422.00	86.00	396.00	140.00	385.00
Net surplus.....	4,695.44	65.86	1,385.98	9.17	4,487.55
Net loss.....					

## "C"—Continued

## Hydro Municipalities for Year Ended December 31, 1923

				MUSKOKA SYSTEM		
Sunderland P.V.	Uxbridge 1,492	Woodville 455	WASDELLS SYSTEM SUMMARY	Gravenhurst 1,621	Huntsville 2,316	MUSKOKA SYSTEM SUMMARY
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
1,879.48	4,320.73	2,068.96	24,084.08	5,748.58	9,446.17	15,194.75
1,441.09	4,131.97	1,346.33	16,629.53	3,967.40	5,446.44	9,413.84
804.86	1,424.26	1,855.48	12,293.02	9,809.11	13,755.58	23,564.69
.....	.....	.....	.....	.....	1,083.33	1,083.33
551.25	2,856.59	720.00	9,301.37	2,058.49	1,898.00	3,956.49
1,814.26	.....	1,023.77	5,409.05	.....	.....	.....
.....	.....	.....	150.00	171.25	241.38	412.63
6,490.94	12,733.55	7,014.54	67,867.05	21,754.83	31,870.90	53,625.73
3,427.84	5,525.26	3,873.91	33,271.64	9,025.15	24,872.15	33,897.30
.....	.....	.....	.....	.....	.....	.....
405.65	466.30	429.25	4,376.94	2,509.43	1,422.94	3,932.37
.....	.....	.....	.....	.....	.....	.....
23.68	119.84	20.95	363.60	389.82	87.75	477.57
.....	.....	.....	.....	.....	.....	.....
103.82	605.79	10.91	1,879.86	2,039.49	2,489.07	4,528.56
.....	.....	.....	66.71	.....	.....	.....
962.71	972.82	544.17	6,162.66	1,805.46	715.70	2,521.16
183.94	.....	136.30	1,246.65	2,204.32	1,075.15	3,279.47
5,107.64	7,690.01	5,015.49	47,368.06	17,973.67	30,662.76	48,636.43
1,383.30	5,043.54	1,999.05	20,498.99	3,781.16	1,208.14	4,989.30
.....	.....	.....	.....	.....	.....	.....
176.00	314.00	126.00	2,045.00	1,463.00	627.00	2,090.00
1,207.30	4,729.54	1,873.05	18,453.99	2,318.16	581.14	2,899.30
.....	.....	.....	.....	.....	.....	.....

## STATEMENT

## Detailed Operating Reports of Electrical Departments of

ST. LAWRENCE  
SYSTEM

Municipality	Alexandria	Apple Hill P.V.	Brockville	Chesterville
Population	2,319		9,377	941
EARNINGS				
	\$ c.	\$ c.	\$ c.	\$ c.
Domestic service.....	5,155.02	688.47	35,622.98	4,098.45
Commercial light.....	4,592.49	609.54	26,034.58	3,209.30
Commercial power.....	7,719.05	659.30	45,570.09	7,343.78
Municipal power.....	1,692.08		11,050.69	
Street lighting.....	3,250.00	690.00	13,553.00	1,105.00
Rural service.....				
Miscellaneous.....	400.40			
Total.....	22,809.04	2,647.31	131,831.34	15,756.53
EXPENSES				
Power purchased.....	14,060.69	1,543.73	44,794.60	9,802.42
Substation operation.....			7,260.61	
Substation maintenance.....				
Distribution system, operation and maintenance.....	793.13	61.65	2,061.70	1,099.03
Line transformer maintenance.....				
Meter maintenance.....			1,978.02	
Consumers' premises expenses.....				
Street lighting, operation and main- tenance.....	137.03	33.35	621.49	57.14
Promotion of business.....			504.46	
Billing and collecting.....			943.30	
General office, salaries and expenses.	1,121.55	230.05	3,944.88	183.94
Undistributed expenses.....			2,261.22	139.77
Interest.....	2,504.26	351.43	7,647.76	354.95
Sinking fund and principal payments on debentures.....	2,145.21	144.08	5,715.41	264.06
Total expenses.....	20,761.87	2,364.29	77,733.45	11,901.31
Gross surplus.....	2,047.17	283.02	54,097.89	3,855.22
Gross loss.....				
Depreciation.....	705.00	101.00	3,147.00	362.00
Net surplus.....	1,342.17	182.02	50,950.89	3,493.22
Net loss.....				



## “C”—Continued

## Hydro Municipalities for Year Ended December 31, 1923

Lancaster 612	Martintown P.V.	Maxville 785	Prescott 2,723	Williamsburg P.V.	Winchester 1,058	ST. LAWRENCE SYSTEM SUMMARY
\$ c. 1,557.48 951.36 78.34 ..... 1,400.00 ..... .....	\$ c. 571.65 433.07 ..... 375.00 110.13 ..... .....	\$ c. 2,140.40 2,222.09 855.46 ..... 1,798.83 ..... .....	\$ c. 8,617.09 4,947.78 4,418.86 1,941.73 4,508.00 ..... .....	\$ c. 893.22 530.32 217.32 ..... 360.00 ..... .....	\$ c. 6,124.53 2,558.82 829.65 ..... 1,521.00 103.13 .....	\$ c. 65,469.29 46,089.35 67,691.85 14,684.50 28,560.83 110.13 503.53
3,987.18	1,489.85	7,016.78	24,433.46	2,000.86	11,137.13	223,109.48
4,363.86 ..... .....	972.60 ..... .....	4,945.04 ..... .....	9,572.36 1,505.48 15.68 .....	1,371.33 ..... .....	5,358.43 ..... .....	96,785.06 8,766.09 15.68
104.90 ..... .....	30.50 ..... .....	454.09 ..... .....	1,753.16 259.05 .....	104.51 ..... .....	730.21 ..... .....	7,192.88 2,237.07 .....
68.15 ..... .....	18.75 ..... .....	32.32 ..... .....	449.13 41.89 .....	48.49 ..... .....	64.88 ..... .....	1,530.73 504.46 985.19
181.41 ..... .....	41.39 ..... .....	173.79 ..... .....	2,589.03 391.55 .....	7.10 ..... .....	607.29 ..... .....	9,080.43 2,792.54 13,541.41
690.76 ..... .....	279.90 ..... .....	976.29 ..... .....	183.57 ..... .....	96.04 ..... .....	456.45 ..... .....	10,909.34
397.08	183.26	510.73	1,211.93	122.89	214.69	154,340.88
5,806.16	1,526.40	7,092.26	17,972.83	1,750.36	7,431.95	68,768.60
.....	.....	.....	6,460.63	250.50	3,705.18	.....
1,818.98	36.55	85.48	.....	.....	.....	.....
181.00	82.00	331.00	683.00	82.00	142.00	5,816.00
.....	.....	.....	5,777.63	168.50	3,563.18	62,952.60
1,999.98	118.55	406.48	.....	.....	.....	.....

## STATEMENT

## Detailed Operating Reports of Electrical Departments of

RIDEAU  
SYSTEM

Municipality	Carleton Place	Kemptville	Lanark	Perth
Population	4,123	1,220	575	3,710
<b>EARNINGS</b>				
	\$ c.	\$ c.	\$ c.	\$ c.
Domestic service .....	13,249.12	5,646.92	1,966.24	14,352.84
Commercial light .....	7,671.08	6,175.07	1,190.69	9,493.91
Commercial power .....	21,065.99	2,516.99	138.13	14,264.45
Municipal power .....	1,834.02			2,335.71
Street lighting .....	1,849.34	1,386.00	726.16	1,818.62
Rural service .....				
Miscellaneous .....	585.57			1,661.82
Total .....	46,255.12	15,724.98	4,021.22	43,927.35
<b>EXPENSES</b>				
Power purchased .....	37,278.09	6,545.73	2,488.90	24,874.64
Substation operation .....	92.01			370.00
Substation maintenance .....				
Distribution system, operation and maintenance .....	2,575.88	916.78	127.41	1,067.32
Line transformer maintenance .....	154.24			148.06
Meter maintenance .....	390.65			80.43
Consumers' premises expenses .....				
Street lighting, operation and maintenance .....	406.74	44.17	46.56	137.29
Promotion of business .....				
Billing and collecting .....	1,117.37			1,377.00
General office, salaries and expenses .....	1,298.24	529.82	150.83	2,578.45
Undistributed expenses .....	411.39	93.49		516.54
Interest .....	3,226.13	1,404.35	380.45	4,557.00
Sinking fund and principal payments on debentures .....	1,345.55	355.30	295.35	1,613.93
Total expenses .....	48,296.29	9,889.64	3,489.50	37,320.66
Gross surplus .....		5,835.34	531.72	6,606.69
Gross loss .....	2,041.17			
Depreciation .....	1,390.00	487.00	144.00	1,824.00
Net surplus .....		5,348.34	387.72	4,782.69
Net loss .....	3,431.17			

“ C ”—Continued

Hydro Municipalities for Year Ended December 31, 1923

		THUNDER BAY SYSTEM	OTTAWA SYSTEM	TRENT SYSTEM		
Smiths Falls 6,529	RIDEAU SYSTEM SUMMARY	Port Arthur 15,629	Ottawa 112,899	Bloomfield 512	Havelock 1,258	Kingston 22,234
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
27,991.85	63,206.97	55,526.19	185,916.79	1,696.39	4,870.76	65,725.36
13,961.93	38,492.68	36,892.19	86,984.66	845.06	1,548.84	60,376.47
23,821.10	61,806.66	338,532.24	47,564.97	2,010.49	451.55	48,959.97
3,835.42	8,005.15	35,244.14	30,970.29	.....	.....	6,388.04
4,020.84	9,800.96	17,628.93	68,241.90	1,050.00	2,325.00	24,878.23
.....	.....	.....	.....	111.37	.....	.....
498.15	2,745.54	471.39	936.24	.....	.....	671.62
74,129.29	184,057.96	484,295.08	420,614.85	5,713.31	9,196.15	206,999.69
39,300.24	110,487.60	299,178.18	140,720.48	3,193.88	3,694.55	69,433.53
1,101.22	1,563.23	8,756.24	13,009.28	.....	.....	10,195.40
369.13	369.13	1,107.45	.....	.....	.....	2,939.40
3,503.85	8,191.24	22,182.08	22,034.11	40.65	959.18	17,217.11
4.63	306.93	147.71	120.36	.....	.....	3,711.33
34.75	505.83	1,331.05	7,693.03	.....	.....	2,985.63
.....	.....	.....	.....	.....	.....	.....
331.10	965.86	4,987.47	24,282.63	46.02	83.88	8,997.33
.....	.....	469.06	6,529.01	.....	.....	1,427.31
807.26	3,301.63	3,143.29	26,705.31	.....	.....	3,438.53
2,159.76	6,717.10	10,284.56	15,509.02	246.45	215.12	8,363.70
1,328.89	2,350.31	6,943.60	10,747.24	.....	.....	8,512.21
9,984.51	19,552.44	16,587.64	42,959.09	663.40	1,830.36	12,541.12
6,880.21	10,490.34	16,121.31	18,486.95	225.49	991.48	9,304.67
65,805.55	164,801.64	391,239.64	328,796.51	4,415.89	7,774.57	159,067.27
8,323.74	19,256.32	93,055.44	91,818.34	1,297.42	1,421.58	47,932.42
.....	.....	.....	.....	.....	.....	.....
3,892.00	7,737.00	13,500.00	46,726.00	243.00	550.00	8,416.00
4,431.74	11,519.32	79,555.44	45,092.34	1,054.42	871.58	39,516.42
.....	.....	.....	.....	.....	.....	.....



## STATEMENT

## Detailed Operating Reports of Electrical Departments of

TRENT  
SYSTEM—Continued

Municipality	Lakefield	Marmora	Norwood	Omemeë	Peterboro
Population	1,193	792	748	485	21,439
EARNINGS					
Domestic service.....	4,371.89	2,026.81	2,871.65	1,734.41	75,853.54
Commercial light.....	3,170.08	1,294.90	1,774.20	882.26	40,522.25
Commercial power.....	2,603.43	260.08	1,496.49	4,702.80	71,549.20
Municipal power.....					
Street lighting.....	2,208.00	1,992.00	2,115.50	1,000.00	16,197.95
Rural service.....					
Miscellaneous.....					
Total.....	12,353.40	5,573.79	8,257.84	8,319.47	204,122.94
EXPENSES					
Power purchased.....	4,623.44	1,760.44	3,277.02	6,028.12	108,159.18
Substation operation.....					3,867.89
Substation maintenance.....					36.28
Distribution system, operation and maintenance.....	900.02		618.47	392.92	17,093.55
Line transformer maintenance.....					476.08
Meter maintenance.....					4,874.48
Consumers' premises expenses.....					
Street lighting, operation and maintenance.....	71.66	35.00	76.82	63.90	5,114.86
Promotion of business.....					
Billing and collecting.....					4,984.90
General office, salaries and expenses.....	285.22	417.80	224.30	146.27	9,258.55
Undistributed expenses.....					7,912.09
Interest.....	1,901.61	925.54	1,960.63	621.66	14,473.98
Sinking fund and principal payments on debentures.....	439.90	645.05	470.43	425.59	7,984.18
Total expenses.....	8,221.85	3,783.83	6,627.67	7,678.46	184,236.02
Gross surplus.....	4,131.55	1,789.96	1,630.17	641.01	19,886.92
Gross loss.....					
Depreciation.....	571.00	330.00	663.00	357.00	7,341.29
Net surplus.....	3,560.55	1,459.96	967.17	284.01	12,545.63
Net loss.....					

\*Two months' operation.

## “ C ”—Concluded

## Hydro Municipalities for Year Ended December 31, 1923

Picton 3,263	*Warkworth P.V.	Wellington 840	Whitby	TRENT SYSTEM SUMMARY	ALL SYSTEMS GRAND SUMMARY
\$ c. 11,817.03	\$ c. 227.08	\$ c. 3,089.36	\$ c. 10,147.45	\$ c. 184,431.73	\$ c. 5,166,452.24
7,001.42	189.91	1,948.27	5,262.79	124,816.45	3,260,772.50
7,680.07		2,300.79	12,742.52	154,757.39	5,927,666.37
3,411.75			2,114.34	11,914.13	1,161,598.60
4,361.71	137.50	882.00	2,596.87	59,744.76	1,269,604.48
				111.37	116,639.06
2,468.99			32.00	3,172.61	316,311.21
36,740.97	554.49	8,220.42	32,895.97	538,948.44	17,219,044.46
16,326.60	568.04	3,169.90	16,884.34	237,119.04	8,699,026.67
			14.69	14,077.98	474,442.13
				2,975.68	133,815.53
383.32		470.78	2,104.30	40,180.30	636,477.41
			65.77	4,253.18	75,920.10
			424.03	8,284.14	139,104.81
					218,682.02
970.39		122.08	1,114.74	16,696.68	299,579.08
				1,427.31	184,371.00
			101.84	8,525.27	444,306.92
5,148.51	33.56	256.52	2,010.60	26,606.60	937,463.47
69.00			201.74	16,695.04	359,206.91
	4.57	1,154.11	3,216.56	39,293.54	1,615,205.16
338.69		340.96	1,536.88	22,703.32	990,907.14
23,236.51	606.17	5,514.35	27,675.49	438,838.08	15,208,508.35
13,504.46		2,706.07	5,220.48	100,110.36	2,010,536.11
	51.68				
854.00		422.00	1,245.78	20,993.07	916,782.75
12,650.46		2,284.07	3,974.70	79,117.29	1,093,753.36
	51.68				

## STATEMENT "D"

Comparative Statistics Relating to the Supply of Electrical Energy for Domestic Service, for Commercial Light Service and for Power Service in Hydro Municipalities for Each Year Since the Inauguration of Service up to the Year 1923. Showing Growth in Number of Consumers, in Revenue and in Consumption, and Reductions in Net Cost per Kilowatt-Hour

Municipality	Domestic service						Commercial light						Power				Total number of consumers	
	Revenue	Consumption	Number of consumers	Av'g monthly consumption	Average monthly bill	Net cost per kw-hr.	Net cost prior to Hydro	Revenue	kw-hrs.	Number of consumers	Av'g monthly consumption	Average monthly bill	Net cost per kw-hr.	Net cost prior to Hydro	Revenue	Number of consumers		Average horsepower
Year	\$	kw-hrs.		kw-hr	\$ c.	cents	cents	\$	kw-hrs.		kw-hr	\$ c.	cents	cents	\$	c.		\$
Acton—							10											
1913	1,236.50	.....	82	.....	.....	.....	10	1,567.48	.....	62	.....	.....	.....	10	318.77	3	.....	.....
1914	1,463.72	21,192	146	15	.....	6.9	.....	1,496.18	19,878	58	28	2.08	7.5	.....	836.13	5	.....	.....
1915	1,931.11	29,079	183	15	.....	6.6	.....	1,725.73	24,336	53	36	2.59	7.1	.....	1,019.27	5	.....	.....
1916	1,942.11	29,685	185	15	.....	6.5	.....	1,592.62	35,227	60	52	2.35	4.5	.....	1,565.53	7	.....	.....
1917	2,016.13	34,268	200	15	84	5.9	.....	1,600.56	38,244	65	49	2.05	4.2	.....	4,116.69	9	.....	.....
1918	2,154.00	41,593	219	16	85	5.2	.....	1,360.35	32,897	61	43	1.80	4.1	.....	5,166.36	9	157	26.22
1919	2,628.12	44,352	235	16	93	5.9	.....	1,613.56	39,807	65	51	2.07	4.1	.....	5,329.46	10	170	30.39
1920	3,115.26	76,922	260	25	1.00	4.0	.....	1,672.82	40,272	71	47	1.96	4.2	.....	5,230.46	10	199	26.78
1921	3,650.48	100,205	301	28	1.01	3.6	.....	2,012.27	56,732	69	68	2.34	3.5	.....	5,558.31	14	200	26.15
1922	4,374.68	131,954	351	31	1.03	3.3	.....	2,364.01	70,027	64	91	3.08	3.4	.....	6,901.68	16	216	25.85
1923	5,834.01	205,605	383	44	1.26	2.8	.....	2,475.16	77,647	74	87	2.79	3.1	.....	8,729.16	18	267	25.85
																	315	27.74
Agincourt—																		
1923	2,161.85	34,391	84	34	2.14	6.2	.....	325.59	2,333	10	19	2.71	13.9	.....	1,003.19	2	26	38.58
Ailsa Craig—																		
1916	579.57	6,270	51	.....	.....	9.2	None	213.46	1,910	11	.....	.....	11.2	None	15.57	1	.....	.....
1917	776.93	7,584	55	12	1.22	10.2	.....	255.84	932	19	.....	.....	11.2	.....	1,591.95	4	40	39.80
1918	820.95	9,176	58	13	1.22	8.9	.....	299.58	3,432	24	13	1.19	8.7	.....	4,003.23	3	87	46.01
1919	1,087.47	12,991	71	15	1.28	8.4	.....	496.94	3,578	27	11	1.53	13.1	.....	3,786.31	1	93	31.03
1920	1,292.33	14,654	78	16	1.38	8.8	.....	630.19	6,627	30	18	1.75	9.5	.....	5,400.16	3	141	38.30
1921	1,402.73	20,369	95	18	1.23	6.9	.....	722.21	7,553	32	20	1.88	9.6	.....	5,297.07	3	124	42.71
1922	1,557.35	25,145	99	21	1.31	6.2	.....	729.78	8,509	32	22	1.90	8.6	.....	5,532.03	3	128	43.22
1923	1,708.00	30,602	138	19	1.03	5.5	.....	735.81	9,838	30	27	2.04	7.4	.....	4,267.97	3	124	34.41





## STATEMENT "D"—Continued

Comparative Statistics Relating to the Supply of Electrical Energy for Domestic Service, for Commercial Light Service and for Power Service in Hydro Municipalities for Each Year Since the Inauguration of Service up to the Year 1923. Showing Growth in Number of Consumers, in Revenue and in Consumption, and Reductions in Net Cost per Kilowatt-Hour

Municipality	Year	Domestic service						Commercial light						Power				Total number of consumers			
		Revenue	Consumption	Number of consumers	Avg monthly consumption	Average monthly bill	Net cost per kw-hr.	Net cost prior to Hydro	Revenue	Consumption	Number of consumers	Avg monthly consumption	Average monthly bill	Net cost per kw-hr.	Net cost prior to Hydro	Revenue	Number of consumers		Average horsepower	Average cost per horsepower	
Ayr—	1915	892.63	16,031	79	13	1.12	5.5	cents	\$ 773.08	9,477	35	26	1.61	8.1	cents	\$ 348.78	1	.....	.....	115	
	1916	1,084.46	12,314	83	14	1.08	8.8	12.5 +	804.00	12,960	48	23	1.50	6.2	25	393.39	2	32	30.20	133	
	1917	1,124.21	14,228	92	14	1.08	7.9	25	857.27	12,441	48	17	1.37	6.9	.....	996.44	2	41	25.19	142	
	1918	1,178.84	14,666	94	13	1.05	8.0	.....	806.01	10,134	49	27	1.99	7.8	.....	1,033.02	2	41	24.76	145	
	1919	1,461.64	18,926	103	15	1.19	7.7	.....	1,118.50	14,474	47	35	2.75	7.8	.....	1,015.08	3	70	32.17	153	
	1920	1,762.84	21,747	105	17	1.40	8.1	.....	1,421.75	18,329	43	30	2.62	8.7	.....	2,251.84	6	86	29.60	162	
	1921	1,862.55	27,255	115	20	1.35	6.8	.....	1,319.32	15,200	42	33	2.27	6.9	.....	2,546.21	5	78	28.43	180	
	1922	2,075.16	33,177	129	21	1.34	6.4	.....	1,281.59	18,594	47	44	2.30	5.1	.....	2,217.52	4	71	37.92	193	
	1923	2,300.13	46,228	143	26	1.34	4.9	.....	1,288.55	24,866	47	.....	.....	.....	.....	2,592.40	3	.....	.....	.....	
	Baden—	1913	884.11	.....	75	.....	.....	.....	None	*	.....	*	7	75	10.0	.....	2,242.77	4	.....	.....	79
1914		1,247.81	6,920	82	7	75	10.0	.....	*	5,547	*	13	98	7.4	.....	4,580.23	4	.....	.....	86	
1915		938.33	12,729	72	13	98	7.4	.....	*	.....	*	16	86	5.5	.....	4,588.87	4	.....	.....	76	
1916		808.21	8,824	84	16	86	5.5	.....	*	5,772	*	23	12	98	8.4	.....	5,059.33	5	175	29.96	86
1917		842.09	10,066	58	12	98	8.4	.....	.....	5,827	23	21	98	4.3	.....	5,243.91	5	185	28.11	87	
1918		975.04	16,543	60	23	98	4.3	.....	.....	5,865	26	25	97	4.7	.....	5,202.04	4	211	26.87	99	
1919		1,097.74	15,917	68	20	97	4.7	.....	.....	7,372	28	.....	.....	.....	.....	5,669.93	5	222	25.89	107	
1920		1,338.03	18,212	73	.....	.....	.....	.....	.....	10,089	24	36	1.60	4.4	.....	5,747.18	6	230	25.94	108	
1921		958.06	25,280	78	27	1.02	3.8	.....	456.15	10,390	24	48	1.53	3.2	.....	5,967.22	6	252	25.39	114	
1922		1,150.47	38,721	86	38	1.11	2.9	.....	440.60	13,894	25	54	1.48	2.7	.....	6,397.12	4	238	30.34	118	
1923		1,361.82	53,387	89	49	1.28	2.5	.....	445.92	16,340	.....	.....	.....	.....	.....	7,221.43	4	.....	.....	.....	

Barrie—	1913	10,071.55	563	20	1.54	7.3	9	9,252.70	200	58	3.85	9	13	3,390.29	776	
	1914	11,149.49	651	18	1.24	7.1		9,464.64	200	65	3.93		13	3,712.24	864	
	1915	11,087.68	843	20	1.14	5.8		9,572.91	252	63	3.50		14	4,567.76	1,109	
	1916	11,907.10	896	22	1.02	4.6		10,635.67	257	63	3.50		18	6,918.33	1,171	
	1917	11,232.68	942	22	1.14	5.8		8,750.24	253	61	2.86		19	7,978.72	1,214	
	1918	12,456.76	956	24	1.08	4.4		7,365.45	258	58	2.40		20	9,296.34	1,234	
	1919	12,395.37	1,079	23	96	4.2		7,245.39	268	88	2.25		22	12,077.45	1,369	
	1920	14,459.88	1,279	35	94	2.7		7,245.01	280	94	2.16		23	11,398.66	1,582	
	1921	16,926.24	1,349	45	1.05	2.3		8,227.70	267	121	2.57		27	10,595.15	1,643	
	1922	19,647.34	1,517	40	1.08	2.7		9,191.01	386	84	1.98		29	10,471.50	1,932	
	1923	24,779.83	1,597	82	1.29	1.5		10,564.19	392	130	2.24		32	10,528.02	2,021	
	Beachville—	1913	562.97	45	11	7.9	None	9	*	*	7.9	None	9	4	5,993.81	49
1914		587.33	45	11	74	6.8		296.37	12	34	2.05		4	5,368.04	49	
1915		363.33	37	13	84	6.8		4,847	12	34	2.05		4	5,593.15	53	
1916		400.81	42	12	79	6.6		263.62	12	27	1.83		3	5,393.02	57	
1917		419.11	44	12	79	6.6		286.14	12	39	1.99		3	6,354.25	59	
1918		441.44	47	11	79	6.8		267.81	13	42	1.86		3	7,684.75	63	
1919		467.51	53	14	74	5.4		421.38	13	54	2.70		3	7,174.94	69	
1920		788.33	69	15	95	6.1		375.22	19	39	1.65		3	8,631.75	91	
1921		786.32	71	13	92	6.9		433.10	23	33	1.57		3	7,992.11	97	
1922		869.79	74	19	96	5.1		630.79	25	58	2.10		3	8,422.87	102	
1923		965.48	76	26	1.06	4.0		607.21	29	46	1.74		3	11,924.75	108	
Beaverton—		1915	1,484.62	131	13	90	6.9	Flat	1,149.67	56	25	1.53	Flat	5	456.74	192
	1916	1,417.39	131	13	89	7.1		1,065.23	60	28	1.58		6	383.45	197	
	1917	1,482.00	20,685	148	17	1.28		1,041.84	51	37	1.87		7	650.02	206	
	1918	2,109.23	27,754	127	17	7.6		1,167.92	52	37	1.87		8	1,235.93	187	
	1919	2,818.75	39,920	142	23	1.65		1,318.27	53	57	2.07		8	1,608.86	203	
	1920	3,472.74	59,573	151	33	1.91		1,723.15	52	60	2.76		11	3,332.06	214	
	1921	3,908.27	53,580	159	28	2.05		2,155.25	55	58	3.27		13	3,790.32	227	
	1922	4,262.25	76,443	165	39	2.15		2,114.40	60	66	2.94		14	3,383.24	239	
	1923	5,508.56	107,088	298	30	1.54		2,291.72	61	77	3.11		14	4,608.61	373	
	Beeton—	1918	268.41	62	13	1.14	8.9	11+15	144.29	18	26	2.46	11+15	2	905.60	82
		1919	904.40	66	14	1.41	9.8		738.36	25	30	2.70		1	3,336.77	92
		1920	1,284.55	76	14	1.41	9.8		906.28	28	30	2.70		2	3,740.12	106
1921		1,753.33	79	19	1.85	9.7		1,242.18	30	38	3.45		2	4,507.27	111	
1922		2,107.96	89	21	1.97	9.4		1,408.90	29	45	4.05		3	3,802.85	121	
1923		2,369.07	93	35	2.12	8.3		1,445.83	32	48	3.76		3	3,037.04	128	

\* Domestic and Commercial Light Revenue not divided.



## STATEMENT "D"—Continued

Comparative Statistics Relating to the Supply of Electrical Energy for Domestic Service, for Commercial Light Service and for Power Service in Hydro Municipalities for Each Year Since the Inauguration of Service up to the Year 1923. Showing Growth in Number of Consumers, in Revenue and in Consumption, and Reductions in Net Cost per Kilowatt-Hour

Municipality	Year	Domestic service						Commercial light						Power						
		Revenue \$ c.	Consumption kw-hrs.	Number of consumers	Av'g monthly consumption kw-hr	Average monthly bill \$ c.	Net cost per kw-hr. cents	Net cost prior to Hydro cents	Revenue \$ c.	Consumption kw-hrs.	Number of consumers	Av'g monthly consumption kw-hr	Average monthly bill \$ c.	Net cost per kw-hr. cents	Net cost prior to Hydro cents	Revenue \$ c.	Number of consumers	Average horsepower per horsepower	Total number of consumers	
Belle River—	1923	3,134.84	52,864	97	45	2.69	5.9		926.81	7,879	19	34	4.06	11.9			523.08	2	1730.76	118
	1917	2,256.70	30,314	212	12	89	7.4	10	2,113.67	28,786	84	29	2.09	7.3	10		47.40	3		299
	1918	2,281.49	29,136	216	11	88	7.8		1,843.63	21,546	76	22	1.92	8.5			1,578.42	10	81 19.48	302
	1919	2,998.75	45,345	259	15	97	6.6		2,541.02	46,942	85	46	2.49	5.4			3,178.87	9	135 23.55	353
	1920	3,519.19	70,262	308	19	95	5.0		2,956.41	60,862	91	56	2.71	4.8			3,237.99	11	142 22.80	410
Blenheim—	1921	4,396.96	69,897	359	16	1.02	6.3		3,638.77	69,641	93	62	3.25	5.2			3,832.93	11	150 25.55	463
	1922	4,861.99	86,881	406	18	1.00	5.6		3,799.58	73,293	98	62	3.23	5.2			4,607.90	11	184 25.04	515
	1923	5,270.86	106,973	389	22	1.12	4.9		3,574.09	82,114	101	67	2.94	4.4			4,953.38	13	194 25.53	515
	1920	1,184.19	12,063	76	13	1.30	9.8	None	607.68	6,283	15	35	3.38	9.7	None		1,000.32	4	36 27.79	95
	1921	1,481.86	16,381	78	17	1.58	9.1		665.41	6,114	16	32	3.48	10.9			635.83	3	24 26.49	97
Bloomfield—	1922	1,585.28	18,410	88	17	1.50	8.8		736.46	7,390	19	32	3.23	10.0			789.12	4	26 30.35	111
	1923	1,696.39	22,052	89	20	1.48	7.6		845.06	6,859	17	33	4.14	12.4			2,010.49	6	59 34.07	112
	1915	624.86	6,563	59	12	1.20	9.5	10+25	553.80	7,298	42	28	1.88	7.6			313.74	3		104
	1916	926.86	9,322	70	12	1.20	9.9		882.26	13,081	36	28	1.88	6.7	10+25		3,947.32	4		110
	1917	1,191.92	12,829	78	13	1.27	9.3		698.70	12,534	44	26	1.46	5.6			2,856.39	5	117 24.41	127
Bolton—	1918	1,262.21	12,072	80	12	1.33	10.0		791.76	12,997	44	24	1.49	6.1			3,882.39	5	110 35.25	129
	1919	1,285.93	16,710	90	16	1.19	7.5		874.67	14,154	42	28	1.73	6.2			2,812.67	7	101 28.84	139
	1920	1,450.23	19,690	97	17	1.24	7.4		1,380.69	18,262	43	31	2.34	7.6			4,060.05	9	143 28.39	149
	1921	1,963.73	26,630	118	19	1.39	7.4		1,593.76	17,686	38	39	3.50	9.0			3,473.82	10	144 24.12	166
	1922	2,154.22	27,989	119	20	1.51	7.6		1,310.13	13,980	40	29	2.73	9.4			4,185.85	8	156 26.83	315
1923		2,510.07							1,097.96								2,421.67			

Bothwell—	1915	230.61	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	....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<b>Brockville—</b>	1916	12,897.12	144,913	965	.....	9.0	21,994.02	253,153	312	.....	5.54	8.7	9	15,828.82	31	.....	1,308
	1917	14,507.95	152,066	1,018	13	1.22	22,907.56	246,940	378	59	5.54	9.3	.....	30,744.84	49	631	1,445
	1918	15,731.23	162,902	1,146	12	1.21	23,405.06	250,375	353	57	5.35	9.3	.....	49,647.73	47	.....	1,546
	1919	18,510.68	324,923	1,339	15	1.15	22,816.26	310,515	370	70	5.14	7.3	.....	37,013.69	56	902	1,765
	1920	20,943.36	324,733	1,396	20	1.25	20,382.61	368,790	344	89	4.94	5.6	.....	38,572.72	59	1,113	1,799
	1921	27,780.61	382,226	1,542	21	1.50	24,960.63	399,529	350	95	5.94	6.2	.....	43,864.40	65	1,210	1,957
	1922	31,330.52	434,339	1,686	21	1.55	25,198.96	405,571	374	90	5.61	6.2	.....	49,391.67	63	1,323	2,123
	1923	35,622.98	516,382	1,838	23	1.61	26,034.58	418,744	376	93	5.77	6.2	.....	56,620.78	64	1,688	2,278
<b>Burford—</b>	1916	577.69	9,005	64	.....	6.4	380.44	7,569	30	.....	.....	5.0	Flat	519.72	1	.....	15
	1917	834.73	11,519	79	13	98	837.51	13,262	34	34	2.18	6.3	.....	549.31	1	25	914
	1918	1,089.73	15,489	81	16	1.13	922.16	13,700	27	38	2.56	6.7	.....	434.05	1	25	109
	1919	1,330.31	18,769	100	17	1.10	1,064.23	17,680	32	46	2.77	6.0	.....	543.25	1	25	133
	1920	2,023.41	.....	115	.....	1.56	1,194.81	.....	34	.....	3.02	.....	.....	279.34	1	7	150
	1921	2,817.52	31,375	127	21	1.84	1,673.49	18,555	37	42	3.77	9.0	.....	132.50	2	4	166
	1922	3,491.08	42,104	139	25	2.09	1,966.34	26,266	42	52	3.90	7.5	.....	1,057.03	2	36	186
	1923	3,507.24	57,432	152	31	1.92	1,795.05	22,587	38	49	3.95	7.9	.....	994.82	5	51	195
<b>Burgessville—</b>	1917	359.41	5,299	29	.....	.....	115.15	1,506	9	.....	.....	.....	None	815.36	1	88	39
	1918	379.94	4,025	32	11	1.01	102.66	1,321	10	12	95	7.7	.....	875.67	1	30	43
	1919	423.05	5,623	37	13	95	127.43	1,375	10	11	1.06	9.3	.....	643.88	1	28	48
	1920	593.18	8,102	45	15	1.10	147.91	1,955	10	16	1.23	7.6	.....	688.75	1	30	56
	1921	756.62	8,281	44	16	1.43	288.50	2,615	12	18	2.00	11.0	.....	821.31	1	30	57
	1922	757.10	10,556	49	18	1.29	257.31	3,131	12	22	1.79	8.1	.....	656.82	1	30	62
	1923	855.50	11,550	50	19	1.42	246.85	2,986	12	20	1.72	8.3	.....	1,147.02	1	30	63
<b>Caledonia—</b>	1913	404.60	.....	17	.....	.....	*	.....	16	.....	.....	.....	None	470.34	1	.....	34
	1914	880.54	.....	21	.....	.....	*	.....	32	.....	.....	.....	.....	188.54	1	.....	54
	1915	265.62	4,618	24	16	98	950.38	18,325	33	47	2.44	5.4	.....	138.42	1	.....	58
	1916	263.39	4,800	27	16	86	777.38	20,000	37	47	1.85	4.0	.....	519.82	3	.....	67
	1917	283.63	5,500	33	13	79	786.20	22,800	38	50	1.72	3.4	.....	777.85	4	48	.....
	1918	354.98	7,256	40	16	82	807.14	19,464	42	42	1.68	4.1	.....	922.18	4	33	86
	1919	453.53	9,106	44	17	86	907.76	24,929	45	46	1.68	3.7	.....	733.31	8	40	97
	1920	671.96	19,407	60	28	93	1,155.04	44,932	49	76	1.97	2.6	.....	939.23	9	71	118
	1921	994.76	20,634	76	23	1.09	1,584.02	61,357	55	93	2.40	2.6	.....	1,139.37	7	72	138
	1922	1,202.16	33,960	91	31	1.10	1,731.70	61,842	60	86	2.41	2.8	.....	958.20	7	77	158
	1923	1,481.52	38,301	100	31	1.23	1,828.29	63,631	64	82	2.38	.....	.....	1,377.07	8	85	172

STATEMENT "D"—Continued

Comparative Statistics Relating to the Supply of Electrical Energy for Domestic Service, for Commercial Light Service and for Power Service in Hydro Municipalities for Each Year Since the Inauguration of Service up to the Year 1923. Showing Growth in Number of Consumers, in Revenue and in Consumption, and Reductions in Net Cost per Kilowatt-Hour

		Domestic service						Commercial light						Power							
Municipality	Year	Revenue	Consumption	Number of consumers	Av'g monthly consumption	Average monthly bill	Net cost per Kw-hr.	Net cost prior to Hydro	Revenue	kw-hrs.	Number of consumers	Av'g monthly consumption	Average monthly bill	Net cost per kw-hr.	Net cost prior to Hydro	Revenue	Number of consumers	Average horsepower	Average cost per horsepower	Total number of consumers	
Cannington—																					
	1915	\$ 1,599.40	.....	135	.....	.....	.....	.....	\$ 1,120.04	.....	65	.....	.....	.....	.....	.....	\$ 464.26	6	.....	.....	206
	1916	1,720.25	25,049	150	15	1.00	6.9	12.5	973.63	13,808	73	17	1.17	7.1	12.5	462.47	7	.....	.....	230	
	1917	2,040.39	29,390	137	17	1.19	6.9	.....	936.22	19,722	70	23	1.10	4.7	.....	495.80	7	45	11.02	214	
	1918	2,264.80	40,160	143	24	1.34	5.6	.....	917.90	16,741	64	20	1.14	5.4	.....	726.87	9	48	15.14	216	
	1919	2,656.21	53,287	162	27	1.37	5.0	.....	1,437.51	24,496	63	33	1.90	5.9	.....	786.09	9	64	12.28	234	
	1920	3,713.43	73,365	176	35	1.76	5.1	.....	2,042.35	24,518	68	30	2.34	8.3	.....	1,132.55	10	70	16.18	254	
	1921	4,384.72	61,107	182	28	2.01	7.2	.....	2,398.50	32,801	70	39	2.85	7.3	.....	1,207.13	11	69	17.49	263	
	1922	4,563.79	97,542	189	43	2.01	4.7	.....	2,491.41	30,794	67	38	3.10	8.2	.....	1,074.84	10	71	15.14	266	
	1923	4,265.22	72,116	194	31	1.83	5.9	.....	2,380.92	28,220	72	32	2.88	8.4	.....	1,148.35	12	73	15.73	278	
Carleton Place—																					
	1920	8,241.32	210,676	636	28	1.08	3.9	6	6,835.20	229,583	144	133	3.95	3.0	6	17,787.06	18	64	27.4	798	
	1921	11,854.98	296,188	664	37	1.49	4.0	.....	7,974.78	193,141	150	107	4.43	4.1	.....	20,531.28	13	709	28.96	827	
	1922	12,654.99	249,425	713	29	1.48	5.1	.....	7,206.47	143,660	160	75	3.75	5.0	.....	23,811.52	14	800	29.76	887	
	1923	13,249.12	270,913	755	29	1.46	4.8	.....	7,671.08	157,775	168	78	3.80	4.8	.....	22,900.01	17	771	29.70	940	
Chesley—																					
	1917	2,122.78	25,792	185	12	.95	8.2	Flat	1,971.03	30,058	81	31	.....	.....	Flat	1,725.38	10	64	26.96	276	
	1918	2,348.43	32,368	202	14	1.01	7.2	.....	2,071.77	37,126	78	39	2.17	5.5	.....	2,846.85	13	104	27.37	293	
	1919	2,975.29	46,212	226	17	1.10	6.4	.....	2,679.48	46,369	81	48	2.76	5.8	.....	4,642.70	15	169	27.47	322	
	1920	4,000.52	68,967	259	22	1.29	5.8	.....	2,943.77	50,415	83	51	2.96	5.8	.....	7,364.09	15	207	35.58	357	
	1921	5,352.03	84,811	269	26	1.66	6.3	.....	3,523.13	49,937	90	46	3.26	7.0	.....	7,717.82	14	215	35.89	373	
	1922	5,894.11	84,407	282	25	1.74	7.0	.....	4,301.33	50,095	92	54	3.90	7.2	.....	8,823.91	16	243	36.31	390	
	1923	6,036.92	91,062	293	25	1.71	6.6	.....	4,201.13	56,266	90	52	3.88	7.4	.....	7,503.74	18	247	30.38	363	

Chatham—													
1915	5,581.54	110,552	949	.....	5.5	8+25	2,806.81	81,805	180	.....	3.4	8+25	1,136
1916	10,155.37	176,508	1,171	14	80	5.8	7,427.36	174,204	215	81	3.48	449.70	1,401
1917	13,245.86	257,773	1,261	18	91	5.1	10,633.12	249,739	271	86	3.65	3,766.37	1,578
1918	14,124.28	371,827	1,309	24	91	3.8	12,102.91	381,388	265	118	3.76	16,573.93	1,609
1919	16,019.69	474,303	1,432	28	93	3.4	12,994.41	434,425	280	129	3.87	35,750.36	1,750
1920	43,039.25	1,175,474	3,360	29	1.07	3.7	27,592.06	801,594	572	115	4.02	38,069.64	1,750
1921	48,442.47	1,524,750	3,442	37	1.17	3.2	31,165.17	945,133	636	122	4.08	62,829.08	4,019
1922	52,252.33	1,657,651	3,540	39	1.23	3.1	33,091.92	1,047,783	745	117	3.70	72,338.56	4,208
1923	58,371.93	2,093,428	3,491	49	1.39	2.7	37,988.73	1,246,010	625	166	5.06	77,861.75	4,416
												80,531.46	4,244
Chatsworth—													
1917	379.96	4,256	37	10	87	8.9	253.75	3,980	23	14	92	None	60
1918	445.83	5,409	41	11	95	8.2	259.74	3,542	24	13	92	726.12	66
1919	.....	.....	46	.....	1.09	.....	288.85	5,594	20	23	1.20	622.58	67
1920	724.34	9,279	50	15	1.21	7.8	579.22	7,959	28	24	1.72	237.05	79
1921	985.81	10,999	52	18	1.58	9.0	786.28	8,386	27	26	2.43	298.26	80
1922	1,180.48	12,419	52	20	1.89	9.4	789.95	7,737	28	23	2.35	619.31	81
1923	1,163.89	13,119	56	19	1.73	8.7	743.79	8,586	27	26	2.29	573.88	84
												611.70	
Chesterville—													
1914	530.13	7,672	68	.....	6.9	None	791.67	10,176	35	.....	7.7	None	103
1915	919.27	12,663	85	14	1.00	7.2	1,187.54	12,104	49	21	2.06	.....	134
1916	1,490.99	15,779	89	17	1.43	9.4	1,240.56	15,179	47	26	2.12	177.55	137
1917	1,505.16	18,395	87	17	1.42	8.2	1,226.80	15,360	45	28	2.18	2134.49	134
1918	1,485.76	21,485	96	19	1.35	6.9	2,025.36	32,975	48	59	3.63	5340.27	146
1919	1,815.29	40,414	115	28	1.31	4.7	2,501.13	46,706	39	98	5.34	3,520.13	146
1920	2,618.21	39,488	126	26	1.73	6.6	3,085.60	47,642	47	84	5.47	3,984.91	156
1921	3,559.07	45,564	143	27	2.07	7.8	2,923.10	.....	56	.....	4.35	6,955.75	175
1922	3,955.40	50,992	151	28	2.18	7.7	2,862.69	36,123	52	55	4.41	18637.40	202
1923	4,098.45	56,004	163	28	2.09	7.4	3,209.30	29,274	56	43	4.77	183	206
												14138.72	222
												16843.71	
Chippawa—													
1920	2,078.72	39,243	116	40	2.14	5.3	269.76	.....	23	.....	1.40	None	139
1921	2,932.89	70,746	144	41	1.70	4.1	723.18	11,910	26	38	2.32	.....	170
1922	3,373.63	75,044	172	36	1.63	4.4	706.82	14,871	34	41	1.96	1,487.77	209
1923	3,901.58	50,336	190	22	1.71	7.7	750.34	16,128	26	51	2.40	1,537.85	221



## STATEMENT "D"—Continued

Comparative Statistics Relating to the Supply of Electrical Energy for Domestic Service, for Commercial Light Service and for Power Service in Hydro Municipalities for Each Year Since the Inauguration of Service up to the Year 1923. Showing Growth in Number of Consumers, in Revenue and in Consumption, and Reductions in Net Cost per Kilowatt-Hour

Municipality	Year	Domestic service						Commercial light						Power							
		Revenue	Consumption	Number of consumers	Avg monthly consumption	Average monthly bill	Net cost per kw-hr.	Net cost prior to Hydro	Revenue	Consumption	Number of consumers	Avg monthly consumption	Average monthly bill	Net cost per kw-hr.	Net cost prior to Hydro	Revenue	Number of consumers	Average horsepower	Average cost per horsepower	Total number of consumers	
<b>Clinton</b>																					
		\$ c.	kw-hrs.		kw-hr	\$ c.	cents	cents	kw-hrs.		kw-hr	\$ c.	cents	cents	cents	\$ c.					
1914	2,023.70	21,466	179	16	1.28	9.4	10+25	2,028.08	24,696	111	20	2.31	8.2	10+25	1,255.33	7				297	
1915	2,930.57	36,598	204	17	1.27	8.2		3,068.63	40,234	110	31	2.30	7.6		2,018.24	6				320	
1916	3,161.29	41,986	211	17	1.27	7.5		3,064.37	41,205	122	25	1.92	7.4		2,498.64	7				330	
1917	3,220.73	40,965	246	15	1.19	7.9		2,654.30	34,471	115	25	1.92	7.7		2,348.15	7	74	31.73		368	
1918	3,536.08	60,774	258	20	1.16	5.8		2,311.42	40,289	121	28	1.63	5.7		3,655.01	10	114	32.06		389	
1919	4,447.04	78,737	276	24	1.34	5.6		3,044.93	54,665	124	37	2.05	5.5		4,589.74	11	142	32.32		411	
1920	5,013.77	105,302	332	26	1.26	4.8		3,586.69	65,248	140	39	2.13	5.5		4,652.31	11	144	32.31		483	
1921	6,045.27	120,135	361	28	1.40	5.0		4,064.94	71,139	130	46	2.61	5.7		3,957.98	11	142	27.87		502	
1922	6,478.04	132,243	388	28	1.39	4.8		4,125.00	82,609	131	53	2.64	4.9		4,257.12	11	143	29.77		530	
1923	6,253.49	185,553	411	37	1.26	3.3		4,001.92	79,860	131	51	2.54	5.0		7,696.96	11	222	34.67		553	
<b>Coldwater</b>																					
1913	405.43		48	19	1.30		None	330.25	10,382	132		24	1.40	5.7	None	247.19	1			81	
1914	853.56	12,466	62	21	1.15	6.8		589.85	13,686	39	31	1.54	5.1		617.26	2				103	
1915	874.94	16,706	66	21	1.15	5.3		703.35	16,644	37	36	1.85	5.1		363.88	2				105	
1916	977.62	16,599	70	20	1.20	5.9		848.82	15,939	39	34	1.37	4.0		247.91	2				111	
1917	984.41	22,186	75	25	1.09	4.4		640.85	12,857	38	28	1.48	5.3		182.39	1	20			115	
1918	1,078.94	18,058	79	19	1.16	5.9		687.48	14,697	43	29	1.32	4.5		531.90	2	33	16.12		119	
1919	1,134.84	21,530	131	14	1.72	5.2		680.02	21,905	47	39	1.87	4.8		1,064.00	3	71	14.99		177	
1920	1,415.14	28,034	87	27	1.36	5.0		1,054.87	19,726	47	35	2.32	6.6		1,548.42	4	85	18.22		138	
1921	1,705.16	28,927	87	28	1.63	5.9		1,306.92	19,955	46	35	2.51	7.0		2,079.61	4	102	20.39		139	
1922	1,959.10	34,092	97	30	1.77	5.7		1,415.30	21,957	49	37	2.48	6.6		2,575.81	6	112	23.00		149	
1923	2,034.86	35,746	98	30	1.73	5.6		1,460.25	21,957	49	37	2.48	6.6		2,841.27	6	120	23.67		153	

Collingwood—	1913	83,406	477	.....	8.4	11+10	.....	896.72	18	.....	715
	1914	7,013.66	554	16 1.27	7.6	.....	46 2.78	5,165.39	21	.....	807
	1915	103,598	622	17 1.00	6.0	.....	42 2.04	9,527.70	26	.....	881
	1916	118,336	714	20 1.04	5.1	.....	58 2.18	23,152.41	33	.....	989
	1917	162,464	835	26 94	3.6	.....	66 1.99	38,989.24	41	.....	1,112
	1918	243,070	835	24 1.05	4.3	.....	80 2.23	53,323.26	49	.....	1,202
	1919	257,082	919	24 1.05	4.3	.....	97 2.17	32,037.22	50	.....	1,292
	1919	11,510.41	1,007	37 95	2.7	.....	105 2.45	26,092.24	52	.....	1,371
	1920	523,185	1,077	40 1.08	2.7	.....	105 2.45	18,710.63	53	.....	437
	1921	626,471	1,138	43 1.19	2.7	.....	132 3.32	28,899.13	60	.....	1,491
	1922	635,716	1,183	47 1.30	2.7	.....	89 2.77	32,987.40	59	.....	1,543
	1923	785,397	1,230	53 1.29	2.4	.....	.....	.....	.....	.....	.....
Comber—	1915	3,181	33	.....	6.8	None	.....	.....	.....	.....	66
	1916	5,894	37	14 1.32	9.1	.....	15 1.50	.....	.....	.....	74
	1917	6,542	39	14 1.19	8.3	.....	17 1.60	.....	.....	.....	75
	1918	6,613	41	14 1.22	8.6	.....	14 1.47	.....	.....	.....	76
	1919	8,609	48	15 1.29	8.6	.....	19 1.80	.....	.....	.....	88
	1920	12,974	62	20 1.45	7.4	.....	24 2.30	4,824.67	2	.....	104
	1921	15,852	68	20 1.65	8.0	.....	38 2.69	5,294.15	2	.....	110
	1922	17,892	74	20 1.73	8.2	.....	40 3.15	4,555.20	2	.....	118
	1923	30,952	77	35 1.88	5.6	.....	47 3.02	4,527.76	2	.....	121
Cooks town—	1918	.....	42	.....	.....	None	.....	754.50	1	.....	55
	1919	259.56	61	17 1.10	6.5	.....	18 1.15	1,335.27	1	.....	81
	1920	12,488	71	21 1.63	7.7	.....	23 1.86	1,669.48	1	.....	93
	1921	13,888.97	76	23 1.96	8.7	.....	28 2.39	1,890.50	2	.....	101
	1922	20,562	80	23 2.09	8.8	.....	28 2.43	1,207.01	1	.....	106
	1923	22,020	81	25 2.09	8.1	.....	34 2.60	53.20	1	.....	108
	1923	24,999	81	25 2.09	8.1	.....	.....	.....	.....	.....	.....
	1923	2,024.44	.....	.....	.....	.....	.....	.....	.....	.....	.....
Creemore—	1915	6,399	78	.....	10.9	Flat	.....	939.20	1	.....	138
	1916	9,678	78	14 1.00	7.2	.....	15 1.72	1,151.96	2	.....	132
	1917	9,257	69	11 1.11	10.5	.....	19 1.91	1,210.57	3	.....	127
	1918	10,159	88	10 1.13	10.4	.....	16 1.72	1,357.87	3	.....	142
	1919	1,070.46	10	1.13	10.4	.....	20 2.05	1,392.15	5	.....	151
	1919	1,229.29	93	10 1.11	11.1	.....	23 2.26	1,516.26	6	.....	178
	1920	15,168	130	10 93	9.3	.....	22 2.39	682.30	6	.....	182
	1921	1,448.31	111	.....	.....	.....	25 2.20	1,422.65	6	.....	172
	1921	1,808.03	.....	1.36	.....	.....	29 2.13	1,425.85	6	.....	187
	1922	19,254	122	14 1.30	9.4	.....	29 2.13	1,747.29	6	.....	187
	1922	1,811.54	126	14 1.22	8.3	.....	.....	.....	.....	.....	.....
	1923	22,297	126	14 1.22	8.3	.....	.....	.....	.....	.....	.....

## STATEMENT "D"—Continued

Comparative Statistics Relating to the Supply of Electrical Energy for Domestic Service, for Commercial Light Service and for Power Service in Hydro Municipalities for Each Year Since the Inauguration of Service up to the Year 1923. Showing Growth in Number of Consumers, in Revenue and in Consumption, and Reductions in Net Cost per Kilowatt-Hour

Municipality	Year	Domestic service						Commercial light						Power						
		Revenue \$ c.	kw-hrs.	Number of consumers	Avg monthly consumption kw-hr \$	Average monthly bill	Net cost per kw-hr.	Net cost prior to Hydro	Revenue \$ c.	kw-hrs.	Number of consumers	Avg monthly consumption kw-hr \$	Average monthly bill	Net cost per kw-hr.	Net cost prior to Hydro	Revenue \$ c.	Number of consumers	Average horsepower	Average cost per horsepower	Total number of consumers
Dashwood—																				
1918	1918	432.06	3,742	31	8	92	11.5	cents	Flat	15	15	12	1.38	11.0	cents	Flat	2,386.71	1	4651.88	47
1919	1919	462.51	4,539	35	11	1.10	10.2	cents	Flat	18	18	14	1.73	12.2	cents	Flat	2,052.60	2	5338.73	55
1920	1920	578.84	6,017	39	13	1.26	9.6	cents	Flat	21	21	15	1.62	10.1	cents	Flat	1,524.60	2	5229.32	62
1921	1921	662.20	7,502	43	14	1.20	8.8	cents	Flat	22	22	12	1.84	13.4	cents	Flat	1,626.21	2	5430.11	67
1922	1922	806.68	8,816	46	16	1.52	9.1	cents	Flat	24	24	21	2.34	11.0	cents	Flat	1,297.43	2	5025.95	72
1923	1923	954.89	10,333	51	16	1.56	9.2	cents	Flat	26	26	19	2.28	12.0	cents	Flat	1,384.67	2	5226.62	79
Delaware—																				
1915	1915	146.16	.....	22	.....	.....	.....	cents	None	114.18	.....	10	.....	.....	.....	None	.....	1	.....	33
1916	1916	354.60	2,835	23	11	1.35	12.5	cents	None	141.64	1,823	12	14	1.07	7.8	cents	.....	.....	.....	35
1917	1917	260.94	2,596	24	9	91	10.1	cents	None	203.25	1,947	12	14	1.21	10.5	cents	.....	.....	.....	36
1918	1918	277.27	3,472	31	10	84	7.9	cents	None	177.94	1,960	6	18	1.64	9.0	cents	.....	.....	.....	37
1919	1919	457.11	3,799	32	10	1.19	11.0	cents	None	156.00	1,781	11	16	1.18	11.0	cents	.....	.....	.....	43
1920	1920	852.14	6,285	34	15	2.09	13.5	cents	None	171.50	2,962	11	22	1.28	5.8	cents	.....	.....	.....	45
1921	1921	822.74	10,545	42	21	1.63	7.8	cents	None	505.52	3,987	12	28	3.51	12.7	cents	.....	.....	.....	54
1922	1922	840.90	10,996	45	21	1.63	7.6	cents	None	652.53	4,746	7	39	5.43	13.7	cents	.....	.....	.....	52
1923	1923	829.73	10,940	42	21	1.64	7.5	cents	None	525.39	4,713	11	35	3.98	11.1	cents	.....	.....	.....	53
Dereham Twp.—																				
1922	1922	1,669.78	.....	.....	.....	.....	.....	cents	.....	729.12	.....	.....	.....	.....	.....	.....	5,765.90	.....	.....	.....
1923	1923	1,505.63	.....	.....	.....	.....	.....	cents	.....	808.96	.....	.....	.....	.....	.....	.....	7,095.22	.....	.....	.....



Year	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950
<b>Dorchester—</b>	6,840	579.23	613.03	768.08	810.17	1,043.54	1,274.20	1,511.61	1,717.89	1,973.07	2,257.20	2,572.00	2,927.20	3,322.20	3,767.20	4,262.20	4,807.20	5,402.20	6,047.20	6,742.20	7,487.20	8,282.20	9,127.20	10,022.20	10,967.20	11,962.20	13,007.20	14,102.20	15,247.20	16,442.20	17,687.20	18,982.20	20,277.20	21,572.20	22,867.20	24,162.20
<b>Drayton—</b>	83	942.09	1,431.29	1,582.55	1,925.38	2,078.59	2,151.10	2,257.20	2,363.30	2,469.40	2,575.50	2,681.60	2,787.70	2,893.80	2,999.90	3,106.00	3,212.10	3,318.20	3,424.30	3,530.40	3,636.50	3,742.60	3,848.70	3,954.80	4,060.90	4,167.00	4,273.10	4,379.20	4,485.30	4,591.40	4,697.50	4,803.60	4,909.70	5,015.80	5,121.90	5,228.00
<b>Dresden—</b>	185	1,093.68	1,995.51	2,158.62	2,308.18	2,471.78	2,635.38	2,798.98	2,962.58	3,126.18	3,289.78	3,453.38	3,616.98	3,780.58	3,944.18	4,107.78	4,271.38	4,434.98	4,598.58	4,762.18	4,925.78	5,089.38	5,252.98	5,416.58	5,580.18	5,743.78	5,907.38	6,070.98	6,234.58	6,398.18	6,561.78	6,725.38	6,888.98	7,052.58	7,216.18	7,379.78
<b>Drumbo—</b>	40	304.49	340.75	350.11	392.90	525.50	722.83	949.84	1,097.50	1,187.29	1,277.08	1,366.87	1,456.66	1,546.45	1,636.24	1,726.03	1,815.82	1,905.61	1,995.40	2,085.19	2,174.98	2,264.77	2,354.56	2,444.35	2,534.14	2,623.93	2,713.72	2,803.51	2,893.30	2,983.09	3,072.88	3,162.67	3,252.46	3,342.25	3,432.04	3,521.83

## STATEMENT "D"—Continued

Comparative Statistics Relating to the Supply of Electrical Energy for Domestic Service, for Commercial Light Service and for Power Service in Hydro Municipalities for Each Year Since the Inauguration of Service up to the Year 1923. Showing Growth in Number of Consumers, in Revenue and in Consumption, and Reductions in Net Cost per Kilowatt-Hour

Municipality	Year	Domestic service						Commercial light						Power				Total number of consumers		
		Revenue	Consumption	Number of consumers	Avg monthly consumption	Average monthly bill	Net cost per kw-hr.	Net cost prior to Hydro	Revenue	Consumption	Number of consumers	Avg monthly consumption	Average monthly bill	Net cost per kw-hr.	Net cost prior to Hydro	Revenue	Number of consumers		Average horsepower	per horsepower
Dublin—	1918	126.62	.....	9	.....	.....	.....	None	257.07	.....	17	.....	.....	.....	.....	959.99	2	.....	.....	28
	1919	186.54	2,400	13	15	1.20	7.8	.....	352.06	4,660	18	22	1.63	7.6	None	826.23	2	29	28.49	33
	1920	393.82	5,312	21	21	1.56	7.4	.....	423.54	5,249	15	28	2.35	8.4	.....	1,095.00	3	34	32.21	39
	1921	503.50	5,920	21	23	1.99	8.5	.....	562.44	5,816	19	24	2.47	9.7	.....	1,172.31	2	37	31.68	43
	1922	574.41	7,599	20	31	2.39	7.5	.....	664.68	6,929	22	28	2.76	9.5	.....	1,027.27	3	32	32.10	45
	1923	602.42	6,665	25	22	2.00	9.1	.....	635.38	5,448	19	23	2.78	11.6	.....	1,166.44	4	35	33.32	48
Dundalk—	1916	924.30	.....	88	.....	.....	.....	Flat	960.58	.....	63	.....	.....	.....	.....	618.52	2	.....	.....	153
	1917	926.52	12,065	80	12	92	7.7	.....	872.71	12,718	76	15	1.05	6.9	.....	876.00	4	27	.....	160
	1918	942.02	14,698	91	14	91	6.1	.....	822.35	13,053	60	16	1.01	6.3	.....	1,772.75	4	82	21.61	155
	1919	1,024.86	16,892	99	14	86	6.1	.....	951.61	17,053	71	20	1.12	5.6	.....	2,306.00	4	94	24.54	174
	1920	1,328.45	19,775	99	17	112	6.7	.....	1,284.67	21,418	75	24	1.43	6.0	.....	2,208.80	3	85	25.99	177
	1921	1,597.79	18,834	106	15	1.24	8.5	.....	1,680.40	29,030	77	31	1.82	5.8	.....	2,558.03	3	84	30.45	186
Dundas—	1922	1,869.84	22,767	115	17	1.41	8.2	.....	1,821.35	34,348	75	37	1.99	5.3	.....	2,328.20	3	77	30.24	193
	1923	1,951.86	26,754	122	18	1.33	7.3	.....	1,764.69	26,126	74	29	1.98	6.7	.....	2,829.70	4	88	32.15	193
	1913	3,045.85	.....	377	.....	.....	.....	10+25	4,193.27	.....	134	.....	.....	.....	.....	3,070.40	27	.....	.....	538
	1914	5,349.24	92,168	520	19	99	5.8	.....	4,198.64	119,947	153	69	2.44	3.5	.....	4,305.96	30	.....	.....	703
	1915	6,139.97	128,600	613	19	90	4.8	.....	4,310.96	157,477	160	84	2.29	2.7	.....	6,930.54	37	.....	.....	810
	1916	6,925.46	146,710	673	19	89	4.8	.....	4,714.78	179,151	168	91	2.39	2.6	.....	10,915.58	35	.....	.....	876
1917	8,335.64	217,654	783	25	95	3.8	.....	4,190.60	154,950	175	75	2.04	2.7	.....	10,284.87	38	659	15.61	996	
	1918	9,361.34	262,147	861	26	95	4.4	.....	4,428.66	192,116	170	92	2.14	2.3	.....	9,077.00	42	590	15.38	1,073
	1919	10,447.60	255,119	631	34	1.40	4.1	.....	5,111.72	213,941	145	123	2.77	2.3	.....	13,861.02	38	839	16.52	814

1920	8,244.97	423,784	754	47	91	1.9		5,239.16	259,955	158	137	2.76	2.0	21,725.24	42	1,128	19.26	954
1921	11,047.75	426,368	848	42	1.09	2.6		6,174.18	276,662	170	136	3.03	2.2	21,717.63	50	1,074	20.22	1,008
1922	12,521.50	507,524	924	47	1.16	2.4		6,386.36	270,767	170	132	3.13	2.3	24,467.72	53	1,265	19.34	1,165
1923	15,046.86	667,581	949	58	1.23	2.4		6,862.82	282,006	165	142	3.46	2.4	24,542.12	51	1,286	19.08	1,165
Dunnville—																		
1918	3,200.84	26,019	143	.....	.....	.....	Flat	3,576.93	47,778	108	.....	.....	.....	Flat	7	49	.....	258
1919	2,540.80	62,366	171	30	1.24	4.1		5,352.52	128,280	134	80	3.33	4.2	4,649.29	15	182	25.55	320
1920	3,227.66	69,303	205	28	1.31	4.6		6,115.30	158,031	141	93	3.61	3.9	5,832.55	16	228	25.58	362
1921	3,982.33	88,049	242	30	1.37	4.5		6,971.57	192,158	142	113	4.09	3.6	7,359.76	17	233	25.24	401
1922	5,213.57	106,758	290	33	1.63	4.8		8,419.06	204,164	157	113	4.67	4.1	10,252.41	18	255	28.86	465
1923	5,884.65	127,856	347	30	1.41	4.6		7,952.73	224,045	162	115	4.09	3.5	10,252.41	23	331	30.97	532
Durham—																		
1916	1,518.72	17,091	155	.....	.....	8.9	Flat	1,057.33	13,949	67	.....	.....	8.8	Flat	.....	.....	.....	222
1917	1,619.86	12,821	170	6	79	12.6		954.19	21,855	71	26	1.12	4.3	30.00	1	.....	.....	242
1918	1,812.80	20,682	183	9	85	8.7		1,067.28	16,616	82	19	1.24	6.4	782.44	1	50	15.68	266
1919	2,168.82	29,500	200	12	90	7.4		1,486.18	27,215	83	24	1.50	6.3	713.92	1	50	14.27	284
1920	3,095.24	45,075	223	17	1.15	6.7		2,182.30	37,720	86	37	2.11	5.8	2,430.41	6	116	20.95	316
1921	4,071.98	60,400	252	20	1.35	6.7		2,774.44	40,596	87	39	2.66	6.8	8,893.04	8	280	31.77	347
1922	4,480.34	63,225	273	20	1.42	7.0		3,068.96	49,900	89	47	2.90	6.1	14,269.06	8	392	36.40	370
1923	4,592.86	87,660	285	25	1.34	5.2		3,200.58	58,515	95	51	2.80	5.4	13,672.42	8	361	37.84	388
Dutton—																		
1915	318.85	3,970	108	.....	.....	8.0	Flat	206.59	2,818	43	.....	.....	7.3	Flat	1	.....	.....	152
1916	1,353.04	17,243	112	13	1.03	7.8		960.27	13,256	52	23	1.34	7.2	135.31	1	.....	.....	165
1917	1,381.08	17,710	114	13	1.02	7.8		967.98	15,954	54	26	1.49	6.7	73.76	1	10	.....	169
1918	1,420.59	18,079	127	12	98	7.8		1,007.14	15,728	62	22	1.44	6.4	1,001.85	3	45	22.26	192
1919	1,640.83	23,705	139	14	99	6.9		1,051.10	20,094	70	24	1.32	5.5	2,539.93	3	83	30.60	212
1920	1,835.49	26,088	155	14	99	7.0		1,324.59	25,045	71	29	1.73	5.3	2,359.98	3	89	26.52	229
1921	2,035.51	38,559	159	20	1.07	5.3		1,410.52	32,815	75	40	1.57	4.0	2,483.44	3	93	26.70	237
1922	2,163.68	46,781	172	23	1.09	4.6		1,498.41	35,878	73	40	1.68	4.1	2,547.27	4	98	25.99	249
1923	2,479.83	62,503	171	30	1.20	3.9		1,705.44	44,064	72	51	1.97	3.8	3,050.53	6	111	27.48	249
Elmira—																		
1914	1,908.41	20,875	158	.....	.....	9.5	11.4+	2,020.81	28,490	65	.....	.....	7.1	11.4+	8	.....	.....	231
1915	2,059.11	27,576	185	13	1.00	7.5	10	1,674.44	28,368	85	32	1.85	5.9	2,801.33	10	.....	.....	280
1916	2,211.16	30,817	233	12	88	7.2		1,665.69	35,515	92	33	1.56	4.7	3,635.22	12	.....	.....	338
1917	2,383.62	38,918	238	14	84	6.1		1,854.61	47,159	91	43	1.70	3.9	3,613.47	13	162	22.31	342
1918	2,701.28	51,735	243	17	93	5.2		1,988.36	54,317	89	50	1.84	3.6	4,277.44	14	169	25.31	346
1919	3,206.49	68,574	269	21	98	4.7		2,207.99	68,820	79	73	2.33	3.2	4,621.96	13	196	23.58	361
1920	4,582.08	123,941	313	33	1.22	3.7		2,821.51	82,169	94	73	2.50	3.4	6,117.79	15	235	26.03	422
1921	5,990.36	191,037	348	46	1.43	3.1		3,082.61	95,700	98	81	2.62	3.2	8,020.20	22	416	19.28	468
1922	7,142.86	270,347	383	61	1.63	2.6		4,014.00	103,874	98	88	3.41	3.8	11,132.93	21	453	24.58	502
1923	8,686.57	363,357	407	74	1.78	2.3		4,414.87	124,086	108	95	3.40	3.5	12,359.39	22	483	25.58	537



## STATEMENT "D"—Continued

Comparative Statistics Relating to the Supply of Electrical Energy for Domestic Service, for Commercial Light Service and for Power Service in Hydro Municipalities for Each Year Since the Inauguration of Service up to the Year 1923. Showing Growth in Number of Consumers, in Revenue and in Consumption, and Reductions in Net Cost per Kilowatt-Hour

Municipality	Year	Domestic service						Commercial light						Power							
		Revenue	Consumption	Number of consumers	Avg monthly consumption	Average monthly bill	Net cost per kw-hr.	Net cost prior to Hydro	Revenue	Consumption	Number of consumers	Avg monthly consumption	Average monthly bill	Net cost per kw-hr.	Net cost prior to Hydro	Revenue	Number of consumers	Average horsepower	Average cost per horsepower	Total number of consumers	
Elmvale—	1913	284.34		52	10	1.03	9.9	None	358.60		52	48	25	1.49	5.8	None	438.38	1			105
	1914	673.18	6,856	57	10	1.07	9.1		896.11	15,402	48	25	1.49	5.8				2			107
	1915	704.12	7,728	78	10	87	9.1		778.93	16,193	64	25	1.16	3.9		1,186.44	2			144	
	1916	816.74	10,562	81	11	85	7.7		736.74	18,644	62	25	1.97	5.0		1,043.96	3			146	
	1917	881.20	11,868	89	11	86	7.4		696.79	13,041	61	19	95	5.3		810.96	3			153	
	1918	941.28	12,895	91	11	87	7.2		873.52	16,755	57	23	1.23	5.2		3,699.00	4		159 23.26	152	
	1919	1,027.05	13,781	98	12	87	7.2		1,030.63	18,028	57	26	1.51	5.8		3,860.83	5		145 26.63	160	
	1920	1,313.94	16,383	101	13	1.08	8.0		1,120.45	22,548	63	30	1.48	4.9		3,722.19	5		149 24.98	169	
	1921	1,491.09	17,927	100	15	1.24	8.3		1,501.27	21,738	64	28	1.96	6.9		4,239.56	7		168 25.24	171	
	1922	1,628.91	22,950	109	18	1.30	7.1		1,437.30	27,523	59	37	1.96	5.2		3,796.04	10		153 24.81	178	
	1923	1,518.13	25,895	110	19	1.15	5.8		1,476.20	26,955	61	36	2.01	5.4		4,129.47	10		167 24.72	181	
Elmwood—	1918	282.62		30				None	83.93		15					None	896.32	1			46
	1919	467.59	6,266	32	16	1.22	7.5		196.91	2,858	17	14	96	6.9		1,429.31	1		47 30.41	50	
	1920	592.57	7,950	33	20	1.50	7.4		351.78	5,273	19	24	1.63	6.8		1,514.17	1		46 33.00	53	
	1921	762.83	8,570	38	19	1.67	8.9		545.58	5,970	17	29	2.67	9.1		1,802.31	1		47 38.35	56	
	1922	792.14	8,528	35	20	1.83	9.2		528.92	5,710	19	26	2.44	9.2		1,345.94	1		38 35.42	55	
	1923	693.42	6,985	34	17	1.69	9.9		463.03	4,098	18	18	2.14	11.2		1,329.93	1		36 36.94		
Elora—	1915	1,044.49	14,009	89			7.4	10+25	1,820.07	25,431	60				7.1	10+25	197.78	1			150
	1916	1,253.03	20,500	105	18	1.08	6.1		1,828.25	27,945	63	38	2.48	6.5		972.12	2			170	
	1917	1,400.12	31,600	123	23	1.02	4.4		1,937.30	40,200	64	52	2.52	4.8		3,640.75	2		120 30.34	189	
	1918	1,537.70	28,173	134	18	99	5.4		1,765.65	34,357	59	46	2.39	5.1		5,087.10	2		162 31.40	195	

1919	1,809.72	34,910	139	21	1.09	5.2	2,093.34	45,935	65	59	2.65	4.5	7,440.12	3	242,30.74	207
1920	2,256.60	49,514	186	22	1.01	4.6	2,362.02	57,754	70	69	2.81	4.1	6,997.35	3	212,33.01	259
1921	2,590.55	61,731	205	25	1.05	4.2	2,394.68	52,436	68	64	2.94	4.6	6,144.11	3	215,28.58	276
1922	3,407.43	74,104	246	27	1.26	4.6	2,902.98	69,703	70	84	3.50	4.1	8,386.26	3	264,31.77	319
1923	4,093.85	99,973	256	32	1.33	4.0	3,097.29	64,916	65	83	3.97	4.7	9,145.65	3	255,35.86	324
<b>Embro—</b>																
1915	400.50		65				489.67		30				None			95
1916	633.95	5,690	58	7	85	11.1	598.41	10,333	29	29	1.66	5.8	155.54	2		89
1917	664.53	5,391	60	8	94	12.3	522.37	6,322	31	18	1.45	8.2	132.76	2		93
1918	708.60	6,811	64	9	95	10.4	603.76	5,708	36	14	1.53	10.5	267.29	3	13,20.56	103
1919	963.98	10,443	66	13	1.22	9.2	809.77	8,631	35	20	1.93	9.4	979.29	3	34,28.80	104
1920	1,189.47	11,670	71	14	1.40	10.0	1,073.32	8,358	31	22	1.88	12.8	1,722.08	3	51,33.72	105
1921	1,512.70	13,012	73	15	1.73	11.6	1,234.16	10,559	36	24	2.86	11.7	1,930.84	3	50,38.62	112
1922	1,601.30	14,321	81	16	1.73	11.1	1,385.94	10,931	31	27	3.49	12.6	1,712.69	3	48,35.68	115
1923	1,714.85	18,844	82	19	1.74	9.1	1,264.94	13,372	33	33	3.19	9.4	1,825.88	4	65,28.25	119
<b>Etobicoke Twp.—</b>																
1918	16,081.39						1,816.74						8+25			
1919	11,905.18	1,140	84				1,567.41	40,600	60						236,21.23	937
1920	17,352.35	129,700	1,140				1,985.92	56,592	77						253,20.07	1,229
1921	21,326.96	441,178	1,515	24	1.17	4.8	2,734.25	116,924	83	57	2.74	4.8	5,076.25	14	295,17.21	1,612
1922	29,162.15	639,888	2,166	28	1.32	4.5	3,737.70	157,518	130	91	2.93	3.2	6,019.24	14	295,20.40	2,310
1923	46,352.59	1,092,985	2,704	33	1.42	4.2	6,445.75		176	74	3.05	4.0	6,743.04	19	358,19.11	2,899
<b>Exeter—</b>																
1917	2,030.27	25,524	170	13	99	7.9	1,784.53	21,152	87	20	1.71	8.4	2,363.60	3	92,25.69	260
1918	2,327.79	29,434	187	14	1.10	7.9	1,803.63	21,753	84	21	1.75	8.2	4,163.70	3	140,29.74	274
1919	2,806.26	41,835	211	16	1.11	6.9	2,383.33	30,522	88	29	2.26	7.8	4,159.40	5	143,29.09	304
1920	3,402.65	50,578	234	18	1.22	6.7	2,558.70	34,103	94	30	2.27	7.5	4,398.97	7	162,27.16	335
1921	4,196.23	88,361	278	26	1.26	4.7	2,815.15	43,927	90	41	2.61	6.4	4,916.13	7	182,27.01	375
1922	5,217.29	133,719	304	38	1.49	3.9	3,069.92	48,291	92	44	2.81	6.3	5,270.23	8	187,28.18	404
1923	6,182.73	177,624	326	45	1.58	3.5	3,081.61	54,157	97	46	2.64	5.6	5,720.97	8	199,28.75	431
<b>Fergus—</b>																
1915	1,314.03	19,328	114				2,367.91	37,844	91				6.3	10+25		212
1916	1,621.27	24,275	149	16	1.03	6.7	2,111.16	34,953	92	32	2.00	6.0	2,819.21	7		248
1917	1,822.14	29,351	177	15	93	6.2	2,028.47	37,127	93	33	1.84	5.5	1,959.57	8	67,29.25	278
1918	2,086.39	42,774	198	19	92	4.8	2,099.60	44,824	87	41	1.94	4.6	3,332.50	10	125,26.66	295
1919	2,629.72	47,157	212	19	1.03	5.5	2,699.88	60,017	86	58	2.68	4.5	3,573.66	10	153,23.36	308
1920	3,030.75	58,538	291	17	87	5.0	2,775.01	51,512	96	45	2.41	5.4	3,522.57	12	152,23.17	399
1921	4,072.20	70,683	310	19	1.10	5.7	3,873.68	74,448	100	62	3.23	5.2	4,191.93	15	224,18.71	425
1922	6,037.68	143,806	342	36	1.54	4.2	4,011.60	82,405	103	67	3.30	4.8	5,555.43	15	261,21.29	460
1923	6,020.54	186,237	380	32	1.32	3.2	3,902.24	90,164	96	78	3.38	4.3	6,190.06	13	293,21.12	489

## STATEMENT "D"—Continued

Comparative Statistics Relating to the Supply of Electrical Energy for Domestic Service, for Commercial Light Service and for Power Service in Hydro Municipalities for Each Year Since the Inauguration of Service up to the Year 1923. Showing Growth in Number of Consumers, in Revenue and in Consumption, and Reductions in Net Cost per Kilowatt-Hour

Municipality	Domestic service							Commercial light							Power				Total number of consumers	
	Revenue	Consumption	Number of consumers	Avg monthly consumption	Average monthly bill	Net cost per kw-hr.	Net cost prior to Hydro	Revenue	Consumption	Number of consumers	Avg monthly consumption	Average monthly bill	Net cost per kw-hr.	Net cost prior to Hydro	Revenue	Number of consumers	Average horsepower	Average cost per horsepower		
<b>Flesherton</b>																				
1916	\$ 568.76	.....	73	.....	.....	.....	cents	423.83	.....	30	.....	.....	.....	None	.....	.....	.....	.....	103	
1917	621.93	8,364	70	9	74	7.4	None	387.92	7,545	31	20	1.04	5.1	.....	.....	.....	.....	.....	101	
1918	593.44	8,116	52	11	81	9.3	.....	426.20	6,647	28	18	1.20	6.4	.....	.....	.....	.....	.....	81	
1919	725.42	.....	70	.....	.....	.....	.....	437.61	.....	37	.....	.....	.....	.....	.....	.....	.....	.....	109	
1920	1,152.24	.....	85	.....	1.13	.....	.....	763.00	.....	39	.....	1.62	.....	.....	.....	.....	.....	.....	125	
1921	1,585.13	17,321	85	17	1.55	9.1	.....	1,278.80	17,987	37	40	2.88	6.5	.....	.....	.....	.....	.....	123	
1922	1,791.37	.....	88	.....	.....	.....	.....	1,466.00	.....	39	.....	.....	.....	.....	.....	.....	.....	.....	128	
1923	1,311.25	.....	91	.....	.....	.....	.....	1,145.06	.....	41	.....	.....	.....	.....	.....	.....	.....	.....	.....	
<b>Ford City</b>																				
1922	\$ 6,501.74	.....	912	.....	.....	.....	.....	1,745.29	.....	112	.....	.....	.....	.....	.....	8,328.14	23	.....	.....	
1923	23,500.72	1,024,161	1,155	73	1.69	2.2	.....	8,059.08	302,516	150	168	4.47	2.6	.....	.....	31,668.46	30	1,195	26.50	1,335
<b>Forest</b>																				
1917	.....	.....	260	.....	.....	.....	10	.....	.....	104	.....	.....	.....	.....	.....	.....	.....	.....	370	
1918	2,890.91	28,976	268	9	90	9.9	.....	1,899.09	16,504	100	13	1.55	11.5	.....	.....	4,048.14	8	113	35.82	376
1919	3,307.14	33,720	281	10	97	9.8	.....	2,187.74	22,253	116	16	1.57	9.8	.....	.....	4,076.79	14	118	35.40	411
1920	4,406.18	41,264	311	12	1.16	9.8	.....	2,696.04	25,704	102	21	2.20	10.5	.....	.....	4,310.29	14	124	34.76	427
1921	5,366.42	54,057	337	13	1.33	9.9	.....	3,348.69	37,018	106	30	2.63	9.0	.....	.....	4,195.47	15	124	33.83	458
1922	5,784.92	71,850	375	17	1.35	8.0	.....	3,550.92	46,906	102	37	2.83	7.5	.....	.....	4,677.37	20	135	34.65	497
1923	5,991.76	84,858	391	18	1.27	7.0	.....	3,584.25	56,397	104	45	2.87	6.5	.....	.....	3,455.66	22	123	28.09	517



Galt—	1912	8,183.69	830	1.22	11	9,732.86	250	3.25	11	10,042.59	47	1,127	
	1913	10,535.38	1,122	1.10		11,648.49	353			16,575.61	65	1,540	
	1914	15,797.16	1,745	20	1.08	11,952.75	339	68	2.80	23,826.87	70	2,154	
	1915	17,024.42	2,038	23	75	8,794.36	375	92	2.10	30,547.84	75	2,488	
	1916	19,961.17	2,236	28	78	10,485.26	386	115	2.30	36,029.78	79	2,701	
	1917	24,248.31	2,444	36	86	12,082.97	371	156	2.71	48,261.79	83	2,898	
	1918	26,901.52	2,460	41	91	12,190.29	381	135	2.73	54,541.61	87	3,075	
	1919	29,669.11	2,594	46	96	13,856.09	371	152	3.03	43,775.91	100	3,273	
	1920	38,460.34	2,766	58	1.17	17,575.07	404	176	3.63	49,159.43	103	3,485	
	1921	44,879.01	2,962	70	1.26	19,055.01	417	192	3.81	47,079.49	107	3,652	
	1922	61,672.58	3,092	92	1.66	23,325.29	442	212	4.40	60,032.86	118	3,854	
	1923	67,731.45	3,242	1.74		23,275.04	492		3.94	64,340.37	120		
	Georgetown—	1913	661.49	160	1.27	10+10	842.87	50	3.15	10+10	234.32	5	285
1914		3,069.02	242	17	7.2	2,362.33	75	59	8.0	2,976.61	17	334	
1915		2,999.83	294	14	93	2,276.41	97	34	8.9	8,734.01	16	407	
1916		3,174.63	306	16	88	2,101.00	99	45	1.79	10,726.24	21	426	
1917		3,370.42	319	18	90	2,291.61	51,373	45	2.03	12,714.94	22	431	
1918		3,830.25	330	20	98	2,345.75	84	50	4.5	13,184.53	24	438	
1919		3,797.66	380	23	84	2,428.41	103	65	1.97	12,754.41	28	511	
1920		4,599.82	373	26	1.03	3,276.91	99,553	88	2.97	15,701.12	28	511	
1921		5,043.90	419	32	1.00	2,964.37	94	80	3.1	13,546.94	29	545	
1922		6,423.03	556	39	1.09	3,400.50	100	90	2.51	17,400.06	31	713	
1923		8,346.96	559	42	1.24	3,404.54	126	117	2.7	20,304.47	31	657	
Glencoe—		1920	630.50	124		8	675.34	56		10	130.68	2	182
		1921	2,927.75	143	19	1.71	2,724.24	62	32	3.66	2,110.44	3	203
	1922	3,281.92	172	21	1.74	2,688.42	65	45	3.56	2,219.92	4	241	
	1923	3,704.11	186	15	1.68	2,609.05	69	30	3.15	2,214.33	6	261	
	Goderich—	1914	7,197.00	400		9	4,196.49	155		9	1,240.73	10	565
1915		6,072.51	441	18	1.20	5,066.76	168	62	2.60	5,645.26	8	617	
1916		7,086.32	511	19	1.24	5,253.15	159	50	4.1	5,498.56	19	679	
1917		8,161.85	539	21	1.29	5,127.44	150	54	2.68	7,079.23	10	699	
1918		7,980.21	566	20	1.20	4,663.62	147	48	5.1	12,485.34	16	729	
1919		8,216.24	690	26	5.9	5,317.77	147	48	5.4	18,894.59	13	866	
1920		10,687.31	793	21	3.8	6,367.10	163	61	3.9	18,550.96	13	866	
1921		12,258.50	816	21	5.2	152,382	179	71	2.96	16,550.96	17	989	
1922		13,932.54	816	26	4.7	6,097.39	182	77	4.2	15,859.39	17	1,015	
1923		16,341.86	916	23	5.8	6,775.78	187	79	3.6	15,156.13	14	1,117	
			1,008	33	4.0	8,663.03	207	86	3.05	18,246.94	14	1,134	
				33	1.35	214,344	207	86	3.48		19	1,234	

## STATEMENT "D"—Continued

Comparative Statistics Relating to the Supply of Electrical Energy for Domestic Service, for Commercial Light Service and for Power Service in Hydro Municipalities for Each Year Since the Inauguration of Service up to the Year 1923. Showing Growth in Number of Consumers, in Revenue and in Consumption, and Reductions in Net Cost per Kilowatt-Hour

Municipality	Year	Domestic service						Commercial light						Power						
		Revenue	Consumption	Number of consumers	Av'g monthly consumption	Average monthly bill	Net cost per kw-hr.	Net cost prior to Hydro	Revenue	Consumption	Number of consumers	Av'g monthly consumption	Average monthly bill	Net cost per kw-hr.	Net cost prior to Hydro	Revenue	Number of consumers	Average horsepower	Average cost per horsepower	Total number of consumers
Grand Valley—	1917	714.68	7,474	55	11	1.08	9.6	10+25	964.59	10,065	54	10	1.50	9.6	10+25	1,581.78	1	1	3841.62	110
	1918	848.56	10,089	58	14	1.25	8.4		967.98	11,113	48	18	1.58	8.7		1,582.91	2	2	4832.97	108
	1919	1,110.28	14,172	69	15	1.34	8.8		987.20	11,582	48	20	1.55	7.8		1,631.54	1	1	4833.99	117
	1920	1,725.49	19,477	87	19	1.65	8.8		1,484.90	16,388	50	27	2.47	9.1		1,869.20	2	2	5335.27	138
	1921	2,202.44	23,149	98	20	1.87	9.5		2,157.32	17,781	53	28	3.40	12.1		1,786.85	2	2	5830.80	153
	1922	2,493.03	24,664	103	19	2.49	10.1		2,262.67	19,655	53	31	3.56	11.5		2,042.86	2	2	5835.22	158
	1923	2,599.23	30,833	114	23	1.90	8.4		2,322.94	21,125	52	33	3.72	10.9						168
Granton—	1917	484.69	5,782	42	12	.96	8.4	None	176.93	1,774	16	16	1.00	10.0	None	333.85	1	1	4729.71	59
	1918	552.01	5,580	48	10	1.02	9.8		203.06	1,690	18	8	.99	12.0		1,396.61	1	1	4132.23	67
	1919	661.90	7,000	51	11	1.08	9.4		265.43	1,750	21	7	1.05	15.2		1,321.67	1	1	4334.73	73
	1920	886.41	11,599	57	18	1.49	7.9		407.45	5,355	21	21	1.60	7.6		1,562.80	2	2	4534.73	80
	1921	1,085.25	15,898	63	21	1.44	6.8		508.75	6,265	22	24	1.93	8.1		1,747.17	2	2	4241.60	87
	1922	1,184.71	18,110	63	24	1.57	6.5		532.53	6,159	23	22	1.93	8.6		1,637.41	2	2	4238.99	88
	1923	1,170.46	23,657	63	31	1.54	4.9		519.99	7,326	24	25	1.80	7.0		1,851.57	2	2	4442.08	89
Gravenhurst—	1917	2,350.79	39,025	251	13	.78	6.0	Flat	4,412.55	171,716	69	207	5.33	2.6	Flat	4,892.05	9	9	29216.76	329
	1918	1,995.82	37,930	264	12	.64	5.2		4,624.55	141,329	59	184	5.89	3.2		4,786.06	8	8	35213.59	331
	1919	2,326.25	51,625	269	16	.72	4.5		4,901.04	196,134	74	221	5.52	2.5		4,991.09	10	10	31315.94	353
	1920	2,832.40	69,942	290	20	.81	4.5		4,762.31	214,246	80	238	6.93	2.9		6,576.74	12	12	31315.94	382
	1921	4,219.34	83,449	338	22	1.20	6.0		6,239.31	214,246	75	238	6.93	2.9		5,528.86	12	12	21325.96	381
	1922	5,284.76	116,601	343	28	1.39	6.3		3,445.13	88,109	78	95	3.73	3.9		8,246.95	11	11	30227.31	427
	1923	5,748.58			28	1.39	4.9		3,967.40	141,469	88	133	3.65	3.5		9,809.11	11	11	35427.70	442







## STATEMENT "D"—Continued

Comparative Statistics Relating to the Supply of Electrical Energy for Domestic Service, for Commercial Light Service and for Power Service in Hydro Municipalities for Each Year Since the Inauguration of Service up to the Year 1923. Showing Growth in Number of Consumers, in Revenue and in Consumption, and Reductions in Net Cost per Kilowatt-Hour

Municipality	Year	Domestic service						Commercial light						Power				Total number of consumers			
		Revenue	Consumption	Number of consumers	Avg monthly consumption	Average monthly bill	Net cost per kw-hr.	Net cost prior to Hydro	Revenue	kw-hrs.	Consumption	Number of consumers	Avg monthly consumption	Average monthly bill	Net cost per kw-hr.	Net cost prior to Hydro	Revenue		Number of consumers	Average horsepower	Average cost per horsepower
Harrison—																					
	1917	1,556.49	18,184	132	12	98	8.6	10	1,935.38	21,868	68	27	2.37	8.8	10		2,686.93	6	78	34.45	206
	1918	1,774.96	21,205	148	12	1.05	8.3		1,277.37	21,281	67	26	1.57	6.0			2,663.69	5	85	31.33	220
	1919	2,063.50	28,480	175	14	1.04	7.4		1,828.60	5,227	76	28	2.01	7.2			4,394.24	10	136	32.31	261
	1920	2,809.01	40,199	202	17	1.16	7.0		2,377.90	35,117	78	37	2.54	6.8			9,709.58	9	240	40.46	289
	1921	3,412.75	51,821	221	19	1.29	6.6		2,498.35	46,413	78	50	2.67	5.4			8,326.78	7	239	34.84	306
	1922	3,517.32	57,614	232	21	1.29	6.1		2,504.69	37,531	79	40	2.64	6.7			7,309.26	9	204	35.83	320
	1923	3,762.07	70,916	245	24	1.27	5.3		2,633.19	54,860	88	51	2.49	4.7			7,257.36	9	202	35.92	342
Havelock—																					
	1922	4,476.92	65,021	262	21	1.42	6.9		1,429.97	16,779	62	24	1.92	8.5			136.43	1	10	27.29	325
	1923	4,870.76	68,772	266	21	1.52	7.0		1,548.84	20,887	62	28	2.06	7.4			451.55	1	20	22.57	329
Hensall—																					
	1917	1,038.57	10,872	89	11	1.06	9.6	12+20	610.79	7,046	36	18	1.54	8.7	12+20		81.39	2			127
	1918	1,226.25	11,323	105	9	.96	10.8		661.21	5,792	40	12	1.45	11.4			1,729.36	5	57	30.34	150
	1919	1,602.39	19,924	116	14	1.07	8.0		886.86	10,657	43	21	1.72	8.3			2,703.95	6	127	21.29	165
	1920	1,864.17	23,805	120	16	1.29	7.8		1,083.69	11,877	43	23	2.10	9.1			1,776.05	6	115	15.44	169
	1921	2,099.20	25,997	121	18	1.45	8.1		1,391.61	14,850	44	28	2.64	9.4			1,096.52	6	70	15.66	171
	1922	2,369.38	27,429	137	18	1.53	8.6		1,439.11	23,680	45	44	2.66	6.1			1,220.45	10	81	15.07	192
	1923	2,591.25	36,592	141	21	1.53	7.0		1,507.49	15,318	54	23	2.32	9.8			1,611.38	11	97	16.62	205
Hesper—																					
	1913	2,189.00	.....	174	.....	.....	.....	10+15	1,684.75	.....	76	.....	.....	.....	10+15		5,044.30	11	.....	.....	261
	1914	2,635.41	34,848	229	14	1.09	7.6		1,934.75	35,979	85	37	2.00	5.4			6,116.27	13	.....	.....	327
	1915	2,787.48	39,580	272	11	.90	7.0		2,334.15	39,657	90	38	2.22	5.9			9,017.58	14	.....	.....	376
	1916	3,011.73	54,239	277	17	.92	5.5		2,012.28	44,900	84	43	1.93	4.5			11,177.71	12	.....	.....	273







1920	36,308.98	751,367	2,677	23	1.13	4.8	47,611.14	1,167,246	772	126	5.14	4.1	40,763.23	115	1,818	22.42	3,564
1921	45,106.18	1,044,514	3,122	28	1.20	4.3	49,129.35	1,229,740	802	128	5.11	4.0	45,835.78	124	2,295	19.97	4,047
1922	57,519.97	1,435,616	3,498	36	1.45	4.0	58,501.36	1,331,863	787	139	6.14	4.4	55,428.85	131	2,803	19.74	4,416
1923	65,725.36	1,623,808	3,917	34	1.39	4.0	60,376.47	1,526,887	832	152	6.04	3.9	48,959.97	133	2,349	20.84	4,882
Kincardine—																	
1922	6,461.15	103,210	344	25	1.56	6.2	4,057.97	44,142	113	32	2.09	9.2	2,950.97	12	127	23.24	469
1923	8,953.34	206,333	378	45	1.97	4.3	4,829.19	37,720	103	30	3.90	12.8	6,007.67	17	187	32.12	498
Lambeth—																	
1915	344.47	2,991	49	.....	.....	11.5	119.00	1,042	9	.....	.....	11.4	None	1	.....	.....	59
1916	575.65	6,880	54	11	91	8.4	208.96	.....	13	.....	1.58	8.3	249.36	1	.....	.....	68
1917	721.51	7,655	65	11	1.04	9.4	252.56	2,577	13	16	1.62	9.8	182.50	1	.....	.....	79
1918	833.23	9,978	63	13	1.08	8.3	208.28	1,976	11	13	1.44	10.5	392.22	1	5	.....	75
1919	935.30	10,761	75	12	1.04	8.7	289.64	2,701	16	14	1.51	10.7	309.87	2	35	.....	93
1920	1,242.88	14,627	72	18	1.55	8.5	339.28	3,179	14	19	2.02	10.7	312.00	2	12	26.00	83
1921	1,616.48	18,667	86	18	1.57	8.6	414.56	4,341	22	16	1.57	9.5	305.58	2	35	.....	110
1922	1,931.32	28,023	103	25	1.69	6.9	525.13	5,298	22	20	1.99	9.9	326.27	2	20	16.31	127
1923	2,521.75	.....	.....	.....	.....	.....	613.91	.....	.....	.....	.....	.....	345.37	.....	.....	.....	.....
Lakefield—																	
1920	571.45	.....	130	.....	.....	.....	336.69	.....	62	.....	.....	.....	Flat	4	.....	.....	195
1921	2,003.69	29,135	170	14	98	6.9	2,342.58	153,601	56	.....	.....	.....	3,134.24	6	100	31.34	232
1922	2,765.70	42,999	183	20	1.30	6.4	2,694.98	40,417	66	55	3.68	6.6	1,992.23	2	59	33.76	251
1923	4,371.89	63,848	198	26	1.84	6.8	3,170.08	51,482	71	60	3.72	6.1	2,603.43	4	79	32.95	273
Lanark—																	
1922	1,735.71	17,837	81	17	1.78	9.7	1,547.66	10,391	27	32	4.78	14.9	109.71	2	6	18.29	110
1923	1,966.24	20,936	82	21	1.98	9.3	1,190.69	8,486	29	34	3.42	14.1	138.13	2	8	17.26	113
Lancaster—																	
1922	1,230.64	11,182	54	17	1.90	11.0	971.84	7,316	23	26	3.52	13.3	.....	.....	.....	.....	77
1923	1,557.48	14,156	70	16	1.85	11.0	951.36	6,984	22	26	3.60	13.6	.....	.....	.....	.....	93
London—																	
1912	28,196.62	.....	3,851	.....	.....	.....	28,527.44	.....	792	.....	.....	.....	9+25	158	.....	.....	4,801
1913	41,932.42	920,000	5,201	17	77	4.5	39,256.07	1,350,000	1,007	125	3.63	3.0	79,758.96	198	.....	.....	5,406
1914	57,473.08	1,192,000	6,299	18	83	4.8	47,593.44	1,580,000	1,075	127	3.81	3.0	130,936.35	249	.....	.....	7,649
1915	57,184.75	1,732,435	7,326	21	70	3.3	43,751.37	1,452,896	1,046	137	3.44	3.0	148,567.23	271	.....	.....	8,643
1916	17,146.90	2,378,144	8,282	25	76	2.9	48,747.74	1,930,269	1,129	147	.....	2.5	180,204.33	295	.....	.....	9,706
1917	86,454.36	3,288,286	9,036	31	83	2.6	52,511.01	2,277,566	1,261	159	3.66	2.4	181,973.61	328	7,264	22.14	10,625
1918	99,240.58	3,855,134	10,703	32	83	2.5	52,593.28	2,584,904	1,699	143	2.96	2.0	193,686.30	418	10,261	18.87	12,820
1919	118,188.27	4,885,144	11,495	28	86	2.4	67,190.85	3,524,793	1,831	160	3.05	1.9	195,180.40	467	9,491	20.56	13,793
1920	143,963.71	6,609,361	12,386	44	97	2.2	76,450.76	4,287,591	1,979	180	3.30	1.8	211,081.19	513	11,171	18.90	14,878
1921	185,949.18	9,492,585	13,117	60	1.18	1.9	92,874.24	5,533,748	1,785	258	4.38	1.7	245,447.07	466	9,761	25.14	15,368
1922	217,828.22	11,996,050	13,993	74	1.34	1.8	99,302.57	6,000,287	1,872	273	4.53	1.7	269,970.82	490	11,915	22.66	16,355
1923	267,105.90	15,974,734	14,953	89	1.48	1.6	111,888.47	6,706,869	1,881	297	4.95	1.6	331,832.34	545	13,724	24.17	17,379

† London and Port Stanley Railway and London Street Railway revenue excluded.

## STATEMENT "D"—Continued

Comparative Statistics Relating to the Supply of Electrical Energy for Domestic Service, for Commercial Light Service and for Power Service in Hydro Municipalities for Each Year Since the Inauguration of Service up to the Year 1923. Showing Growth in Number of Consumers, in Revenue and in Consumption, and Reductions in Net Cost per Kilowatt-Hour

Municipality	Year	Domestic service						Commercial light						Power						
		Revenue	Consumption	Number of consumers	Avg monthly consumption	Average monthly bill	Net cost per kw-hr.	Net cost prior to Hydro	Revenue	Consumption	Number of consumers	Avg monthly consumption	Average monthly bill	Net cost per kw-hr.	Net cost prior to Hydro	Revenue	Number of consumers	Average horsepower	Average cost per horsepower	Total number of consumers
Listowel—	1917	2,500.80	54,842	243	19	86	4.6	10	3,168.19	51,233	125	34	2.11	6.2	10	3,385.58	12	11230.23		380
	1918	3,820.77	65,119	256	21	1.27	5.8		2,820.74	58,248	128	38	1.85	4.8		7,180.07	13	23330.81		397
	1919	4,311.53	89,975	332	23	1.08	4.8		2,971.08	71,343	135	44	1.91	4.2		10,922.17	18	28138.86		485
	1920	5,657.29	137,168	377	30	1.25	4.1		3,884.08	102,600	132	65	2.62	4.0		13,143.78	20	36336.21		529
	1921	8,190.77	214,353	458	39	1.49	3.8		4,700.32	141,059	142	83	2.76	3.3		12,982.05	18	38233.98		618
	1922	9,584.04	250,128	495	44	1.67	3.8		5,702.40	138,475	141	82	3.35	4.1		11,307.49	19	35731.67		655
	1923	10,337.16	308,432	540	47	1.74	3.3		5,658.00	143,711	143	83	3.29	3.9		11,003.39	23	36630.06		706
Louth Twp.—	1918			24				None												24
	1919			30																30
	1920			46																46
	1921			51																51
	1922																			
	1923	941.17																		
Lucan—	1915	824.07	12,047	87	11	1.00	9.3	None	687.37	8,370	39	17	1.78	10.2	None	18.66	3			129
	1916	1,124.73	16,701	98	14	1.07	7.7		857.11	7,243	42	17	1.82	12.0		159.67	7			147
	1917	1,283.01	15,264	103	14	1.07	7.7		870.97	7,243	39	15	1.82	12.0		2,756.92	10	9030.63		142
	1918	1,309.20	26,105	109	12	1.03	8.5		885.28	11,739	38	25	1.91	7.5		5,650.56	8	13332.48		155
	1919	1,566.54	43,863	115	19	1.14	6.0		921.25	14,136	39	97	1.97	6.5		5,766.69	9	14041.19		163
	1920	1,854.20	69,421	127	29	1.22	4.2		885.18	17,248	41	35	1.80	5.1		6,602.32	10	20831.74		178
	1921	2,343.88	71,976	135	43	1.45	3.4		1,025.25	21,191	40	44	2.14	4.8		7,368.90	10	21334.59		185
	1922	2,737.74	82,475	150	42	1.59	3.8		1,081.12	16,774	38	36	2.31	6.4		5,829.91	9	16834.70		197
	1923	3,414.42		153	44	1.85	4.1		1,062.78	16,865	39	36	2.27	6.3		2,687.51	7	8730.89		199









## STATEMENT "D"—Continued

Comparative Statistics Relating to the Supply of Electrical Energy for Domestic Service, for Commercial Light Service and for Power Service in Hydro Municipalities for Each Year Since the Inauguration of Service up to the Year 1923. Showing Growth in Number of Consumers, in Revenue and in Consumption, and Reductions in Net Cost per Kilowatt-Hour

Municipality	Year	Domestic service						Commercial light						Power							
		Revenue	Consumption	Number of consumers	Avg monthly consumption	Average monthly bill	Net cost per kw-hr.	Net cost prior to Hydro	Revenue	kw-hrs.	Consumption	Number of consumers	Avg monthly consumption	Average monthly bill	Net cost per kw-hr.	Net cost prior to Hydro	Revenue	Number of consumers	Average horsepower	Average cost per horsepower	Total number of consumers
Mt. Brydges—																					
1915	333.43	.....	45	.....	8	1 07	12.7	None	494.02	.....	3,106	15	17	.....	95	.....	517.50	1	.....	.....	61
1916	644.75	5,058	55	.....	8	1 07	12.7	None	170.46	.....	3,106	15	17	.....	95	.....	760.58	2	.....	.....	72
1917	540.17	6,481	58	.....	9	81	8.3	.....	344.16	.....	3,481	20	17	1.69	9.9	.....	627.07	2	27.23	22	80
1918	601.52	7,323	67	.....	9	80	8.2	.....	312.44	.....	3,396	17	15	1.40	9.1	.....	750.69	1	25.30	02	85
1919	811.17	8,900	64	.....	12	1 06	8.9	.....	324.11	.....	3,051	22	12	1.23	10.6	.....	822.74	1	26.31	64	87
1920	1,130.15	13,440	84	.....	13	1 04	8.4	.....	434.78	.....	2,736	19	12	1.91	15.8	.....	707.73	1	23.30	77	104
1921	1,398.23	12,266	77	.....	13	1 51	11.4	.....	457.24	.....	4,446	20	19	1.91	10.3	.....	836.68	1	18.46	48	91
1922	1,398.02	17,208	89	.....	17	1 40	8.1	.....	540.62	.....	5,800	24	22	2.05	9.3	.....	737.60	1	18.40	98	114
1923	1,610.92	23,240	96	.....	20	1 39	6.9	.....	591.31	.....	7,169	26	23	1.89	8.2	.....	889.39	1	21.42	35	123
Mt. Forest—																					
1916	1,967.03	27,337	106	.....	.....	.....	7.2	10	2,420.75	.....	39,059	164	.....	.....	6.2	10	1,739.79	7	.....	.....	277
1917	2,171.91	40,286	176	23	1 28	.....	5.4	.....	2,556.41	.....	37,914	107	30	1.99	6.7	.....	2,533.40	4	136	19.63	287
1918	2,171.73	32,336	187	14	99	6.7	6.0	.....	2,419.72	.....	42,176	107	32	1.88	5.7	.....	3,132.19	4	147	21.30	298
1919	2,596.70	43,495	196	19	1 10	6.0	6.0	.....	2,809.05	.....	59,310	117	42	2.00	4.7	.....	3,561.63	5	152	23.43	318
1920	2,959.09	48,732	205	20	1 20	6.0	6.0	.....	3,625.36	.....	62,877	127	41	2.38	5.8	.....	4,182.42	9	207	20.20	344
1921	4,050.74	66,539	239	23	1 41	6.1	6.1	.....	5,279.82	.....	76,899	128	50	3.44	6.9	.....	5,219.42	10	203	25.71	377
1922	4,683.40	74,673	260	25	1 56	6.2	6.2	.....	5,965.31	.....	86,502	130	56	3.85	6.9	.....	4,996.49	7	202	24.74	397
1923	4,894.10	87,860	274	26	1 48	5.5	5.5	.....	5,472.11	.....	77,866	133	48	3.42	7.0	.....	3,518.14	5	186	18.91	412
Neustadt—																					
1919	419.91	5,586	45	10	78	.....	7.8	12.5	475.59	.....	7,332	24	25	1.65	6.6	.....	389.93	2	16	24.37	71
1920	813.48	14,425	51	24	1 33	.....	5.6	.....	526.21	.....	8,047	26	26	1.69	6.5	.....	2,656.17	4	88	30.18	81
1921	1,159.34	15,187	55	23	1 76	.....	7.6	.....	737.42	.....	6,222	29	18	2.12	11.8	.....	3,214.94	4	92	34.95	88
1922	1,683.22	.....	61	.....	.....	.....	.....	.....	982.18	.....	.....	30	.....	.....	.....	.....	7,690.74	4	.....	.....	95
1923	1,388.03	.....	65	.....	.....	.....	.....	.....	1,099.61	.....	.....	26	.....	.....	.....	.....	5,923.43	5	137	43.23	102



Newbury—	1922	683.98	9,946	43	19	1.34	6.9	543.61	4,973	20	21	2.26	10.9	778.83	1	25 31.15	64
	1923	751.02	8,493	44	16	1.42	8.9	529.29	4,478	23	16	1.91	11.8	899.48	1	27 33.31	68
New Hamburg—	1912	1,195.08		124				1,423.35		63				3,369.05	5		194
	1913	1,589.21		142				1,890.72		63				5,792.20	8		212
	1914	1,779.90	23,010	170	12	89	7.7	1,403.56	19,404	68	25	1.78	7.2	5,209.51	6		243
	1915	1,888.04	33,913	187	16	88	4.9	1,273.38	23,041	70	27	1.54	5.5	2,825.57	4		261
	1916	1,816.44	37,109	196	16	79	5.5	1,211.25	26,492	70	32	1.39	4.6	1,646.90	4		270
	1917	2,052.95	40,407	184	18	93	5.1	1,481.03	34,156	69	41	1.79	4.3	4,299.65	9	188 22.87	262
	1918	2,331.00	45,778	192	20	1.03	5.0	1,410.88	40,225	67	49	1.73	3.5	4,784.71	9	220 21.74	262
	1919	2,597.55	46,124	208	19	1.04	5.5	1,540.57	40,137	64	52	2.01	3.8	5,517.79	10	244 22.61	282
	1920	2,987.68	77,692	222	27	1.12	4.1	1,615.92	37,812	66	48	2.04	4.3	5,613.62	12	240 23.39	300
	1921	3,570.31	99,781	231	36	1.29	3.6	1,751.04	44,237	63	59	2.32	4.0	5,253.46	11	259 20.28	305
	1922	4,033.81	121,551	222	45	1.49	3.3	2,040.13	53,832	78	64	2.43	3.8	6,732.68	13	279 24.13	313
	1923	4,799.76	163,995	268	50	1.49	2.9	2,265.63	50,391	71	59	2.66	4.4	8,565.03	14	309 27.71	353
New Toronto—	1914	653.50	11,947	100						4			7.0		1		105
	1915	1,416.10	19,520	153			5.5			8			5.5	2,140.36	2		163
	1916	1,571.03	29,162	210			5.4	143.32	5,956	10			5.4	9,744.31	4		224
	1917	2,451.49	46,080	320	14	77	5.3	566.42	7,680	22	40	2.95	7.4	30,726.27	8	1,554 19.77	350
	1918	2,631.82	50,723	400	11	60	5.1	1,113.87	18,968	22	71	4.22	5.8	64,854.19	10	2,689 24.11	432
	1919	4,009.94		473				3,143.60		41				79,353.15	14		528
	1920	6,602.26	183,717	537	28	1.02	3.6	2,979.37	199,688	57				97,272.13	12		606
	1921	6,731.42	314,718	631	42	89	2.1	3,798.61	203,510	73	212	4.26	2.0	66,294.41	14	3,399 19.50	718
	1922	9,039.13	346,958	761	42	1.08	2.6	4,089.35	280,063	87	226	5.19	2.2	43,232.18	15	2,399 18.02	863
	1923	13,350.62	620,622	829	63	1.34	2.1	6,176.34		99	226	5.19	2.2	66,486.92	18	2,795 23.78	946
Niagara Falls—	1916	21,733.29		2,050				13,259.02		400				9,613.01	80		2,530
	1917	22,566.76	867,639	2,273	31	99	2.6	11,012.51	651,884	405	134	2.27	1.7	18,804.36	55	713 13.49	2,733
	1918	26,423.31	882,174	2,447	31	93	2.9	10,692.04	528,376	418	107	2.16	2.0	22,242.65	61	1,480 15.03	2,926
	1919	33,221.90	1,419,901	2,648	45	1.05	2.4	12,639.15	899,210	456	164	2.31	1.4	24,686.72	75	1,905 12.96	3,179
	1920	46,839.29	2,378,263	2,907	68	1.34	2.0	15,366.26	909,516	488	155	2.62	1.7	28,739.95	86	2,102 13.67	3,481
	1921	59,722.54	3,598,610	3,048	99	1.63	1.6	21,208.21	1,376,527	528	217	3.35	1.5	33,220.24	90	2,505 13.26	3,666
	1922	72,634.03	4,718,606	3,163	127	1.95	1.5	26,699.31	2,140,826	542	334	4.16	1.2	38,485.41	93	2,687 14.32	3,798
	1923	82,424.59	6,132,605	3,329	153	2.06	1.3	30,780.07	2,657,368	546	405	4.69	1.2	52,157.69	87	2,890 18.04	3,962
Niagara-on-the-Lake—	1919			274						58					5		337
	1920	5,544.75		275		1.68		2,796.38		69		3.38		1,301.68	5	78 16.69	349
	1921	5,847.10		306		1.60		3,291.89		74		3.71		2,544.90	6	12 21.21	386
	1922	5,769.68	156,879	319	42	1.54	3.7	2,777.10	71,474	77	79	3.09	3.7	2,467.05	7	99 24.92	403
	1923	5,842.89	190,306	333	47	1.46	3.0	2,505.01	72,382	79	77	2.74	2.7	2,389.42	7	102 23.42	419

## STATEMENT "D"—Continued

Comparative Statistics Relating to the Supply of Electrical Energy for Domestic Service, for Commercial Light Service and for Power Service in Hydro Municipalities for Each Year Since the Inauguration of Service up to the Year 1923. Showing Growth in Number of Consumers, in Revenue and in Consumption, and Reductions in Net Cost per Kilowatt-Hour

Municipality	Year	Domestic service						Commercial light						Power							
		Revenue	Consumption	Number of consumers	Avg monthly consumption	Average monthly bill	Net cost per kw-hr.	Net cost prior to Hydro	Revenue	kw-hrs.	Number of consumers	Avg monthly consumption	Average monthly bill	Net cost per kw-hr.	Net cost prior to Hydro	Revenue	Number of consumers	Average horsepower	Average cost per horsepower	Total number of consumers	
Norwich—																					
	1912	\$ 862.17	.....	128	kw-hr 15	\$ c. 1.09	cents 6.8	cents 10+25	\$ 674.48	.....	64	kw-hr 20	\$ c. 1.38	cents 6.5	cents 10+25	\$ 263.93	2	.....	.....	194	
	1913	1,926.78	28,172	166	16	1.09	6.2	10+25	1,162.98	17,917	76	22	1.38	6.5	10+25	1,978.55	3	.....	.....	245	
	1914	2,168.13	35,578	198	16	99	6.2	10+25	995.16	20,690	84	22	1.04	6.4	10+25	1,893.72	3	.....	.....	285	
	1915	2,529.91	37,082	228	16	99	6.2	10+25	1,075.79	25,880	80	26	1.09	4.2	10+25	2,169.31	5	.....	.....	313	
	1916	2,319.58	49,858	254	18	84	4.7	10+25	1,168.34	24,909	87	25	1.16	4.7	10+25	2,642.97	6	.....	.....	327	
	1917	8,132.02	55,968	356	16	.....	.....	10+25	1,198.97	24,854	82	25	1.19	4.8	10+25	4,116.38	10	137	30.05	448	
	1918	3,042.12	87,510	242	30	1.06	3.4	10+25	1,064.13	23,559	78	24	1.11	4.5	10+25	2,481.63	8	87	28.52	328	
	1919	3,529.64	101,324	280	30	1.05	3.5	10+25	1,566.15	34,149	76	37	1.55	4.5	10+25	2,370.22	8	97	24.44	364	
	1920	4,136.42	118,478	291	34	1.18	3.5	10+25	1,915.42	42,434	84	42	1.90	4.5	10+25	2,902.47	10	111	26.15	385	
	1921	4,824.49	155,413	305	42	1.32	3.2	10+25	2,235.71	48,524	85	48	2.20	4.6	10+25	3,022.99	7	118	25.62	397	
	1922	5,209.87	161,790	330	43	1.37	3.2	10+25	2,436.17	55,865	92	53	2.31	4.4	10+25	2,426.59	8	113	21.47	430	
	1923	5,986.24	176,237	338	43	1.47	3.3	10+25	2,756.49	67,221	92	60	2.49	4.1	10+25	3,067.52	8	125	24.54	438	
Norwood—																					
	1922	2,413.40	36,746	161	19	1.25	6.6	None	1,627.72	22,199	66	28	2.06	7.3	None	744.35	4	42	17.72	231	
	1923	2,871.65	39,980	178	19	1.34	7.1	None	1,774.20	24,038	70	29	2.11	7.3	None	1,496.49	3	59	25.35	251	
Oil Springs—																					
	1918	87.68	.....	18	.....	.....	.....	None	73.85	.....	7	.....	.....	.....	None	2,240.03	2	.....	.....	27	
	1919	214.44	.....	20	.....	.....	.....	None	173.97	.....	10	.....	.....	.....	None	4,151.58	3	.....	.....	33	
	1920	366.49	.....	20	.....	.....	.....	None	319.75	.....	12	.....	.....	.....	None	5,684.03	6	.....	.....	38	
	1921	701.04	10,587	42	21	1.39	6.6	None	503.46	6,975	17	34	2.40	7.2	None	6,970.28	33	177	39.38	92	
	1922	795.54	12,624	48	23	1.47	6.3	None	527.91	7,023	21	31	2.32	7.5	None	12,387.37	35	285	43.46	104	
	1923	972.72	14,564	49	25	1.65	6.7	None	644.31	9,540	25	32	2.15	6.7	None	12,635.26	35	.....	.....	109	





## STATEMENT "D"—Continued

Comparative Statistics Relating to the Supply of Electrical Energy for Domestic Service, for Commercial Light Service and for Power Service in Hydro Municipalities for Each Year Since the Inauguration of Service up to the Year 1923. Showing Growth in Number of Consumers, in Revenue and in Consumption, and Reductions in Net Cost per Kilowatt-Hour

Municipality	Year	Domestic service						Commercial light						Power				Total number of consumers		
		Revenue	Consumption	Number of consumers	Avg monthly consumption	Average monthly bill	Net cost per kw-hr.	Net cost prior to Hydro	Revenue	Consumption	Number of consumers	Avg monthly consumption	Average monthly bill	Net cost per kw-hr.	Net cost prior to Hydro	Revenue	Number of consumers		Average horsepower	Average cost per horsepower
Owen Sound—																				
1916		16,003.61	225,620	1,376	.....	.....	7.1	6.4+15	23,724.21	388,717	435	.....	.....	6.1	6.4+15	13,772.61	83	.....	.....	1,894
1917		15,740.76	266,322	1,438	16	93	5.9	.....	13,809.15	341,361	419	67	2.71	4.1	.....	28,667.22	84	1,176	24.37	1,941
1918		16,071.58	310,256	1,492	17	91	5.1	.....	14,011.58	341,751	403	69	2.84	4.1	.....	32,069.70	84	1,177	27.25	1,979
1919		17,879.28	605,348	1,611	31	93	3.0	.....	13,931.89	521,847	418	104	2.78	2.7	.....	23,289.00	92	1,005	23.17	2,121
1920		21,798.24	719,181	1,861	32	97	3.0	.....	15,160.58	520,485	449	97	2.81	2.9	.....	24,645.87	105	1,231	20.02	2,415
1921		26,511.72	700,833	2,075	28	106	3.8	.....	16,442.16	730,759	457	133	3.00	2.2	.....	29,116.14	109	1,403	20.75	2,641
1922		31,744.31	955,010	2,285	35	112	3.3	.....	18,851.65	728,910	460	133	3.43	2.6	.....	30,538.65	115	1,567	19.49	2,860
1923		35,771.38	1,245,612	2,410	43	124	2.9	.....	19,593.46	869,446	475	153	3.44	2.3	.....	32,189.46	107	1,526	21.09	2,992
Palmerston—																				
1916		6,102.25	.....	151	.....	.....	.....	Flat	282.57	.....	63	.....	.....	.....	Flat	.....	1	.....	.....	215
1917		2,506.76	32,672	171	16	122	7.7	.....	2,780.86	51,029	71	60	3.26	5.5	.....	1,225.68	2	57	21.50	244
1918		2,563.63	33,104	177	11	122	7.7	.....	2,729.69	50,847	69	60	3.24	5.3	.....	1,401.26	2	57	24.58	248
1919		3,253.16	52,780	213	21	127	6.2	.....	3,344.29	54,590	75	61	7.2	6.1	.....	2,161.21	4	85	25.43	292
1920		4,283.77	102,555	234	36	153	4.2	.....	4,036.64	90,508	75	101	4.00	4.5	.....	3,235.10	5	128	25.27	314
1921		5,035.03	124,636	255	41	162	4.0	.....	4,736.84	95,314	80	99	4.93	5.0	.....	4,581.69	6	171	26.79	341
1922		5,419.45	159,164	277	50	170	3.4	.....	4,110.84	93,623	80	98	4.28	4.4	.....	5,679.92	6	165	34.42	363
1923		5,671.62	214,614	315	56	150	2.6	.....	3,681.80	116,053	80	133	3.83	3.2	.....	6,432.56	7	194	33.67	402
Park Hill—																				
1920		1,530.39	.....	120	.....	.....	.....	10+52	1,106.09	.....	58	.....	.....	.....	10+25	110.15	1	10	.....	179
1921		3,049.70	29,648	146	17	174	10.3	.....	2,243.54	17,506	58	24	3.22	12.8	.....	1,186.35	3	29	40.91	207
1922		3,443.03	36,461	152	20	192	9.4	.....	1,974.60	16,919	63	23	2.74	11.1	.....	1,157.39	4	41	48.23	219
1923		3,437.57	47,386	165	23	173	7.2	.....	2,028.44	22,551	63	30	2.68	8.9	.....	2,027.21	4	73	27.77	232



## STATEMENT "D"—Continued

Comparative Statistics Relating to the Supply of Electrical Energy for Domestic Service, for Commercial Light Service and for Power Service in Hydro Municipalities for Each Year Since the Inauguration of Service up to the Year 1923. Showing Growth in Number of Consumers, in Revenue and in Consumption, and Reductions in Net Cost per Kilowatt-Hour

Municipality	Year	Domestic service							Commercial light							Power				
		Revenue	Consumption	Number of consumers	Avg monthly consumption	Average monthly bill	Net cost per kw.-hr.	Net cost prior to Hydro	Revenue	Consumption	Number of consumers	Avg monthly consumption	Average monthly bill	Net cost per kw.-hr.	Net cost prior to Hydro	Revenue	Number of consumers	Average horsepower	Average cost per horsepower	Total number of consumers
<b>Petrolia—</b>																				
	1917	3,346.54	54,138	292	15	95	6.1	14+20	3,837.48	61,972	150	34	2.13	6.2	14+20	6,666.29	34	216	30.86	476
	1918	4,096.58	64,342	315	17	1.12	6.3		4,138.05	64,510	158	34	2.23	6.4		11,491.46	40	345	33.30	513
	1919	5,024.22	88,243	367	20	1.14	5.7		4,761.37	81,003	163	41	2.43	5.9		16,712.15	53	497	33.62	583
	1920	6,034.68	112,806	427	22	1.18	5.3		5,447.61	94,755	176	45	2.58	5.7		19,193.71	59	581	33.04	662
	1921	7,786.04	151,611	503	25	1.29	5.1		6,246.63	105,872	187	47	2.78	5.9		21,483.70	61	664	32.31	751
	1922	7,797.98	164,276	531	26	1.26	4.8		6,108.86	121,397	192	54	2.69	5.0		19,958.48	68	684	29.18	791
	1923	7,555.96	210,263	552	31	1.14	3.5		5,170.26	131,003	187	58	2.34	3.9		23,303.44	67	884	26.36	806
<b>Pictou—</b>																				
	1919	.....	.....	604	.....	.....	.....	12.5	.....	.....	75	.....	.....	.....	12.5	1,239.91	26	52	23.84	705
	1920	9,915.08	123,499	657	16	1.26	8.0		9,480.61	121,838	122	46	3.56	7.8		9,477.94	32	303	31.28	811
	1921	11,840.43	142,582	698	17	1.41	8.3		9,641.61	112,546	156	60	5.15	8.6		12,162.97	31	343	35.46	885
	1922	11,294.43	177,900	745	21	1.30	6.3		8,540.27	141,822	187	69	4.16	6.0		10,333.64	36	322	32.09	968
	1923	11,817.03	261,212	777	28	1.27	4.5		7,001.42	147,820	168	73	3.47	4.7		7,680.07	43	392	19.59	988
<b>Plattsville—</b>																				
	1915	551.39	6,061	56	.....	.....	9.1	None	477.71	5,091	20	.....	.....	9.4	None	1,128.27	4	.....	.....	80
	1916	666.30	7,422	60	11	96	9.0		580.62	5,900	22	14	1.35	9.8		1,436.62	3	.....	.....	85
	1917	670.35	7,220	60	10	93	9.3		583.58	6,714	22	25	2.21	8.7		768.37	2	37	20.77	84
	1918	699.99	9,011	60	11	97	8.7		636.88	8,489	23	31	2.35	7.5		1,596.81	2	60	26.60	85
	1919	795.79	8,967	62	12	1.07	8.9		826.27	15,051	27	46	2.40	5.2		3,053.72	2	65	46.98	91
	1920	969.31	11,294	65	14	1.24	8.6		873.81	14,655	26	47	2.80	6.0		3,155.32	3	92	34.30	94
	1921	1,066.62	14,362	77	15	1.15	7.4		706.15	10,570	20	44	2.94	6.7		302.26	2	15	20.15	99
	1922	1,283.04	17,448	75	19	1.41	7.3		790.79	16,773	28	58	2.35	4.7		222.29	2	15	14.82	105
	1923	1,585.59	23,008	78	25	1.70	6.8		915.67	11,027	28	33	2.72	8.3		330.98	2	15	12.06	108



oint Edward—		124,855	222	46	2.68	2.6	1,332.94	34,762	34	85	3.26	3.8	4,906.53	10	19525.16	.....
1923  3,348.43																
Port Arthur—																
1913	81,830.66	.....	2,409	.....	.....	.....	.....	.....	500	.....	.....	.....	51,748.11	55	.....	2,464
1914	38,097.65	.....	2,969	.....	.....	.....	.....	.....	550	.....	.....	.....	92,804.49	55	.....	3,574
1915	32,048.37	.....	2,800	.....	.....	.....	.....	.....	550	.....	.....	.....	85,060.78	50	.....	3,900
1916	31,152.52	.....	2,701	.....	.....	.....	.....	.....	481	.....	.....	.....	96,913.51	46	.....	3,228
1917	33,358.31	.....	2,783	.....	.....	.....	.....	.....	503	.....	.....	.....	111,367.47	42	.....	3,328
1918	37,216.29	.....	2,807	.....	.....	.....	.....	.....	535	.....	.....	.....	142,118.26	42	.....	3,384
1919	41,584.37	.....	2,633	.....	.....	.....	.....	.....	625	.....	.....	.....	168,517.53	58	.....	3,316
1920	45,432.34	.....	2,960	.....	.....	.....	.....	.....	590	.....	.....	.....	178,529.32	59	.....	3,609
1921	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1922	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
1923	55,526.19	2,544,274	3,153	67	1.47	2.1	36,892.19	1,458,218	630	193	4.88	2.5	338,532.24	79	18,335 18.46	3,862
Port Colborne—																
1920	4,301.69	101,020	465	25	1.00	4.2	3,082.14	89,448	132	80	2.25	3.5	2,718.09	13	140 19.45	610
1921	8,220.47	104,365	579	24	1.18	5.0	5,125.80	140,397	151	79	2.83	3.6	4,381.18	17	181 24.20	747
1922	9,496.22	246,059	608	34	1.33	3.9	4,990.40	159,052	155	87	2.72	3.1	7,602.88	13	275 27.65	776
1923	11,719.01	422,793	695	51	1.41	2.8	5,524.34	236,224	175	112	2.63	2.3	4,199.73	14	185 22.70	884
Port Credit—																
1913	1,963.22	.....	93	.....	.....	.....	.....	.....	21	.....	.....	.....	848.59	2	.....	116
1914	2,461.42	41,862	125	.....	.....	6.0	.....	.....	35	.....	.....	6.0	308.88	2	.....	162
1915	1,975.29	36,484	141	23	1.24	5.4	587.11	17,934	33	44	1.18	3.3	236.47	3	.....	177
1916	1,781.49	44,251	145	26	1.04	4.0	464.02	13,800	33	35	1.17	3.3	257.40	3	.....	181
1917	1,822.36	42,378	162	23	98	4.3	452.84	12,833	33	33	1.14	3.5	246.63	3	.....	198
1918	2,107.78	58,660	164	29	1.07	3.5	509.82	15,875	33	40	1.28	3.2	203.48	3	.....	200
1919	2,459.05	78,097	182	36	1.13	3.1	669.12	16,213	39	35	1.43	4.1	245.57	3	.....	224
1920	3,173.10	96,791	199	40	1.33	3.3	1,164.86	46,568	44	81	2.21	2.7	406.02	3	.....	246
1921	3,878.10	130,797	221	49	1.46	3.0	1,479.06	48,529	42	93	2.77	3.0	1,536.81	6	33 12.30	269
1922	4,220.61	169,972	241	61	1.52	2.5	1,786.91	75,859	46	145	3.38	2.3	1,525.24	6	64 24.01	293
1923	5,294.45	235,936	270	78	1.63	2.0	1,781.95	79,280	55	136	2.69	2.2	1,343.47	8	67 22.76	333
Port Dalhousie—																
1913	3,742.54	.....	238	.....	.....	.....	.....	.....	*	.....	.....	.....	347.28	3	.....	241
1914	3,656.01	.....	240	.....	.....	.....	.....	.....	10	.....	.....	.....	429.54	3	.....	253
1915	3,608.70	.....	250	.....	.....	.....	.....	.....	10	.....	.....	.....	252.12	2	.....	262
1916	2,868.05	.....	330	.....	.....	.....	.....	.....	23	.....	.....	.....	339.12	8	.....	370
1917	3,249.37	.....	330	.....	.....	.....	.....	.....	32	.....	.....	.....	321.67	8	.....	370
1918	3,224.98	.....	366	.....	.....	.....	.....	.....	29	.....	.....	.....	615.76	10	.....	405
1919	3,620.82	.....	338	.....	.....	.....	.....	.....	32	.....	.....	.....	948.66	10	.....	380
1920	4,055.23	92,034	360	23	96	4.5	1,059.28	23,916	34	60	2.67	4.4	1,234.39	9	85 14.50	403
1921	5,134.11	98,418	373	22	1.15	5.2	1,018.97	22,915	28	68	3.03	4.4	1,054.38	7	71 14.85	408
1922	6,376.33	108,840	411	23	1.36	5.8	1,162.77	31,175	33	86	3.23	3.7	1,758.66	8	128 13.74	452
1923	7,401.61	135,738	516	21	1.19	5.4	1,851.11	26,165	29	75	5.35	7.0	2,318.60	10	119 19.48	555

## STATEMENT "D"—Continued

Comparative Statistics Relating to the Supply of Electrical Energy for Domestic Service, for Commercial Light Service and for Power Service in Hydro Municipalities for Each Year Since the Inauguration of Service up to the Year 1923. Showing Growth in Number of Consumers, in Revenue and in Consumption, and Reductions in Net Cost per Kilowatt-Hour

Municipality	Year	Domestic service						Commercial light						Power				Total number of consumers	
		Revenue	Consumption	Number of consumers	Avg monthly consumption	Average monthly bill	Net cost per kw-hr.	Net cost prior to Hydro	Revenue	Consumption	Number of consumers	Avg monthly consumption	Average monthly bill	Net cost per kw-hr.	Net cost prior to Hydro	Revenue	Number of consumers		Average horsepower
Port Dover—		\$	c.	kw-hrs.	kw-hr	\$	c.	cents	kw-hrs.	kw-hr	cents	kw-hr	\$	c.	cents	cents	\$	c.	
1922	1922	2,069.83	29,380	156	16	1.11	7.0		24,403	26	8.5	26	2.25		8.5		261.85	3	11
1923	1923	3,590.29	54,876	208	21	1.43	6.5		38,976	37	6.5	37	2.42		6.5		938.66	4	21
Port McNicoll—																			
1915	1915	415.03	6,037	60			6.8	None	311.20	6,542			1.07		4.7	None			
1916	1916	618.82	9,450	66	12	82	6.5		301.92	4,738		17			6.4		7.37	1	
1917	1917	829.39		78					381.25			21					77.41	1	
1918	1918	878.50	15,481	82	16	91	5.6		427.47	7,639		19	1.78		5.5		28.09	1	3
1919	1919	1,201.52	18,536	100	15	1.00	6.5		528.68	8,890		34	2.00		5.9		51.13	1	
1920	1920	1,514.24	22,640	103	18	1.22	6.7		566.00	9,560		22	36	2.14	5.9		87.40	1	
1921	1921	1,879.68	30,108	106	24	1.48	6.2		692.07	13,992		26	42	2.22	4.9		109.77	1	
1922	1922	2,024.69	30,862	109	24	1.58	6.5		964.67	14,820		30	46	2.87	6.3		98.90	1	
1923	1923	1,769.16	31,930	112	23	1.31	5.5		1,095.31	16,238		33	41	2.77	6.7		80.81	1	
Port Perry—																			
1922	1922	860.24							509.11								735.45		21
1923	1923	5,722.85							3,270.27										
Port Stanley—																			
1912	1912	897.02		122				Flat	1,106.63			40				Flat	1,314.70	3	
1913	1913	1,828.06		182					1,771.70			60					2,418.00	9	
1914	1914	2,066.41		229					1,753.60			72					2,170.83	12	
1915	1915	2,498.57		274					1,736.42			73					2,064.76	9	
1916	1916	2,956.97		308					1,551.37			72					1,985.92	11	
1917	1917	3,386.56		323					1,714.56			57					3,174.23	6	





## STATEMENT "D"—Continued

Comparative Statistics Relating to the Supply of Electrical Energy for Domestic Service, for Commercial Light Service and for Power Service in Hydro Municipalities for Each Year Since the Inauguration of Service up to the Year 1923. Showing Growth in Number of Consumers, in Revenue and in Consumption, and Reductions in Net Cost per Kilowatt-Hour

Municipality	Year	Domestic service						Commercial light						Power				Total number of consumers		
		Revenue	Consumption	Number of consumers	Avg monthly consumption	Average monthly bill	Net cost per kw-hr.	Net cost prior to Hydro	Revenue	Consumption	Number of consumers	Avg monthly consumption	Average monthly bill	Net cost per kw-hr.	Net cost prior to Hydro	Revenue	Number of consumers		Average horsepower	Average cost per horsepower
Queenston—	1922	996.25	31,563	55	48	1.51	3.1		2,143	159.43	7	26	1.83	7.4		591.09	2	24	24.63	57
	1923	1,443.69	52,085	64	67	1.87	2.7		2,674	154.90	3	87	4.33	6.2		579.52	1	24	24.14	68
	1916	2,173.64	24,975	174	...	...	8.7	10+25	32,594	2,838.32	101	...	...	...	8.7	10+25	740.86	3	...	...
Ridgeway—	1917	2,551.69	31,381	205	14	1.12	8.1		26,199	2,720.19	98	22	2.31	10.3		2,245.85	5	96	23.39	308
	1918	2,726.19	33,538	221	13	1.06	8.1		32,567	2,434.14	97	30	2.08	7.4		4,188.49	6	135	31.02	324
	1919	3,364.53	47,770	269	15	1.04	7.1		46,266	2,991.80	102	38	2.38	6.3		4,510.09	8	166	27.17	379
	1920	4,054.63	63,938	317	15	1.07	7.1		62,322	3,474.32	108	48	2.68	5.6		5,249.31	8	169	31.06	433
	1921	4,524.10	79,775	359	19	1.05	5.7		64,552	3,401.55	121	44	2.34	5.3		6,200.89	9	191	32.46	489
	1922	4,308.72	104,199	391	23	.96	4.2		88,999	3,164.42	128	60	2.13	3.5		6,349.73	11	203	30.97	530
	1923	5,138.35	124,607	424	24	1.00	4.2		100,981	3,501.55	128	66	2.27	3.4		6,057.22	14	204	29.69	566
Ripley—	1922	1,312.40	11,993	64	16	1.71	10.9		12,452	1,598.21	44	24	3.03	12.8		1,618.29	1	39	41.49	109
	1923	1,509.93	15,463	74	18	1.70	9.7		12,389	1,742.65	44	23	3.30	14.0		1,094.16	1	38	28.79	119
Riverside—	1922	3,298.22	...	376	...	...	...		...	320.09	14	...	...	...		312.30	2	...	...	392
	1923	14,832.01	533,595	492	90	2.51	2.7		25,341	1,430.38	21	100	5.67	5.6		1,490.49	5	66	24.09	518
Rockwood—	1913	230.27	...	48	...	...	...	None	...	*	9	...	...	...		470.82	1	...	...	58
	1914	848.55	7,824	54	13	1.38	8.8		...	*	7	...	...	...		1,542.01	3	...	...	64

1915	731.97	9,500	65	13	1.03	7.7	251.27	3,300	10	32	2.46	7.7	907.57	3	78
1916	733.66	11,263	72	14	89	6.5	388.05	5,930	11	47	3.08	6.4	903.57	5	87
1917	795.54	12,740	77	14	90	6.2	380.90	6,061	15	39	2.44	6.3	1,097.05	3	95
1918	860.14	13,242	79	14	91	6.4	372.56	5,812	14	33	2.14	6.4	1,087.21	4	97
1919	1,023.14	17,602	93	16	92	5.8	384.46	6,571	17	32	1.90	5.9	1,177.94	4	114
1920	1,382.39	22,935	94	20	1.23	6.2	480.73	6,116	18	28	1.85	6.7	1,310.28	4	116
1921	1,799.39	27,899	112	21	1.34	6.4	584.02	7,607	16	40	3.04	7.7	2,056.68	4	132
1922	1,939.72	35,916	118	26	1.41	5.4	550.71	7,597	17	40	2.85	7.2	1,434.38	4	139
1923	1,835.72	39,722	125	26	1.23	4.6	508.88	7,663	18	35	2.36	6.6	1,332.84	4	147
<b>Rodney—</b>															
1917	587.46	.....	57	.....	.....	.....	665.84	.....	41	.....	.....	.....	.....	.....	98
1918	794.65	6,522	63	9	1.10	12.0	911.63	7,916	44	15	1.78	11.5	.....	.....	107
1919	1,050.66	10,423	78	11	1.12	10.1	1,224.65	9,712	46	18	2.04	11.4	1,657.98	2	126
1920	1,516.38	15,389	104	12	1.21	9.9	1,373.38	12,641	53	20	2.16	10.9	1,506.77	2	159
1921	1,849.15	20,809	120	14	1.28	8.9	1,548.45	14,445	56	21	2.30	10.7	1,427.43	2	178
1922	1,897.70	26,252	131	17	1.26	7.3	1,362.47	18,950	60	26	1.89	7.2	1,343.34	4	195
1923	2,005.79	31,109	148	17	1.12	6.4	1,373.87	26,218	60	36	1.92	5.2	1,933.14	4	212
<b>St. Catharines—</b>															
1914	2,013.48	53,572	833	.....	.....	3.7	412.75	22,843	92	.....	.....	1.9	12,742.98	20	945
1915	9,540.70	273,389	1,612	19	65	3.5	3,810.11	196,056	192	115	2.23	1.9	25,193.30	34	1,838
1916	16,419.57	591,765	2,410	24	68	2.8	5,925.49	318,877	247	121	2.25	1.5	40,688.67	48	2,705
1917	24,275.56	1,038,894	2,833	31	77	2.3	6,024.34	392,524	270	127	1.99	1.5	71,138.36	52	3,155
1918	30,187.05	1,448,273	3,022	40	84	2.0	6,028.41	374,447	279	113	1.83	1.6	94,632.33	53	3,454
1919	36,710.19	1,815,947	3,428	44	89	2.0	7,401.09	489,325	299	136	2.06	1.5	48,616.67	52	3,719
1920	46,123.30	2,899,265	3,703	65	1.04	1.6	8,930.44	627,664	338	159	2.20	1.4	60,203.07	69	4,110
1921	55,560.41	3,932,393	4,040	81	1.15	1.4	10,321.67	685,855	360	152	2.39	1.5	54,947.24	84	4,484
1922	59,603.93	4,565,984	4,341	88	1.15	1.3	11,409.66	824,900	398	173	2.39	1.4	66,583.84	93	4,832
1923	77,332.47	4,394,072	4,598	79	1.40	1.7	15,293.23	981,783	445	184	2.86	1.5	77,224.26	105	5,148
<b>St. Clair Beach—</b>															
1922	113.46	.....	23	.....	.....	.....	504.81	.....	2	.....	.....	.....	66.64	1	26
1923	719.63	13,273	34	32	1.76	5.4	1,836.97	1,862	1	155	.....	.....	316.19	2	37
<b>St. George—</b>															
1915	203.23	.....	39	.....	.....	.....	139.16	.....	14	.....	.....	.....	311.30	1	54
1916	832.23	11,483	56	20	1.46	7.2	474.38	7,031	24	31	2.08	6.7	583.52	2	82
1917	1,046.91	15,314	60	22	1.50	6.8	478.96	8,067	23	29	1.74	5.9	642.64	3	86
1918	1,138.63	14,034	64	18	1.53	8.1	456.16	8,405	25	29	1.58	5.4	1,379.58	4	93
1919	1,399.56	17,841	71	21	1.64	7.8	595.23	10,711	25	36	1.99	5.5	2,254.91	4	100
1920	1,390.96	19,694	80	20	1.45	7.1	711.98	13,764	24	48	2.47	5.2	2,010.11	4	108
1921	1,312.39	22,771	87	22	1.24	5.8	656.56	13,845	25	46	2.19	4.7	2,029.88	4	116
1922	1,608.26	31,675	96	29	1.48	5.1	719.97	14,384	27	46	2.31	5.0	2,151.07	4	127
1923	1,729.11	36,893	100	30	1.44	4.9	764.20	20,382	26	65	2.44	3.7	2,383.66	4	130





1915	16,517.37	460,103	1,903	23	81	3.6	13,442.48	504,679	434	102	2.73	2.7	44,780.45	101	2,438
1916	20,210.52	629,102	2,241	25	81	3.2	15,145.47	607,131	464	93	2.81	2.5	46,698.91	107	2,812
1917	22,620.72	759,512	2,524	27	79	3.0	14,843.27	600,317	472	107	2.64	2.5	44,977.52	112	3,108
1918	25,561.22	877,011	2,654	28	82	2.9	12,332.86	694,990	481	121	2.15	1.7	53,973.48	112	3,247
1919	29,904.22	1,001,693	3,073	27	81	2.9	14,958.16	796,838	504	132	2.47	1.9	54,035.16	112	3,689
1920	39,060.45	1,486,606	3,485	36	93	2.6	19,489.14	868,845	523	138	3.10	2.2	53,682.89	112	4,120
1921	41,410.99	1,749,059	3,355	43	1.03	2.4	21,113.52	983,369	547	150	3.22	2.1	50,755.91	110	4,012
1922	48,664.67	2,312,688	3,744	54	1.15	2.1	25,144.74	1,148,936	574	171	3.74	2.2	58,344.66	116	4,434
1923	61,460.88	3,196,742	3,911	68	1.30	1.9	27,924.54	1,379,900	593	193	3.92	2.0	73,951.69	112	4,616
Sarnia—															
1917	25,655.32	385,770	2,150	15	99	6.6	18,724.77	405,824	439	75	3.55	4.4	33,693.36	58	2,647
1918	28,772.83	549,370	2,380	20	1.05	5.2	19,935.11	494,635	445	93	3.75	4.0	35,272.45	62	2,887
1919	33,920.44	720,871	2,681	22	1.05	4.7	22,668.63	534,075	492	91	3.84	4.2	68,714.03	70	3,243
1920	44,174.44	1,028,520	2,918	29	1.26	4.3	28,041.43	566,212	477	98	4.90	5.0	100,632.53	65	3,460
1921	51,857.64	1,473,021	3,591	34	1.20	3.5	29,269.89	841,088	546	127	4.47	3.5	90,166.93	79	4,216
1922	57,975.10	1,903,231	3,928	42	1.29	3.0	24,663.65	949,077	565	143	3.54	2.5	92,054.18	86	4,579
1923	69,562.83	2,591,212	3,923	55	1.47	2.6	31,650.47	1,071,813	558	160	4.72	2.9	99,326.63	79	4,560
Scarboro Twp.—															
1919	.....	58,961	428	12	.....	.....	.....	4,054	9	30	.....	.....	.....	1	438
1920	.....	144,202	652	18	.....	.....	.....	3,374	8	35	.....	.....	3,083.31	3	663
1921	13,932.01	305,779	947	27	1.23	4.5	943.89	18,096	15	100	5.24	5.2	3,920.18	8	960
1922	20,438.77	293,567	1,363	.....	.....	.....	83.13	11,845	58	.....	.....	.....	10,281.79	12	1,433
1923	40,972.43	804,373	2,552	26	1.33	5.0	5,163.61	98,561	172	48	2.50	5.2	10,814.89	25	2,749
Seaforth—															
1913	2,124.18	24,665	178	.....	.....	8.6	2,876.47	34,789	105	.....	.....	8.3	7,509.99	10	293
1914	2,467.36	37,453	211	16	1.06	6.8	2,581.30	45,492	112	35	1.98	5.6	7,707.01	10	333
1915	2,593.70	43,162	238	16	96	6.0	2,724.84	48,840	111	37	2.03	5.6	7,685.52	11	360
1916	3,045.65	51,884	280	17	97	5.9	2,941.03	56,380	110	43	2.22	5.2	9,684.11	12	402
1917	3,437.49	59,870	298	17	96	5.8	2,902.34	49,593	112	37	2.16	5.8	15,125.30	13	423
1918	3,675.33	65,761	311	18	99	5.6	2,874.71	50,140	108	38	2.17	5.7	21,124.99	12	431
1919	4,209.20	80,479	326	21	1.08	5.2	3,460.97	62,055	119	43	2.42	5.6	12,034.95	13	455
1920	4,606.78	94,972	400	20	96	4.8	3,764.88	79,380	117	56	2.68	4.8	9,860.95	13	530
1921	5,870.40	138,859	447	26	1.09	4.2	3,610.84	89,515	124	60	2.43	4.0	9,993.15	13	584
1922	6,631.66	182,565	479	32	1.19	3.7	3,567.85	91,694	116	64	2.48	3.9	8,829.97	11	606
1923	7,854.34	250,783	504	41	1.29	3.1	3,879.71	111,753	110	84	2.93	3.4	6,622.57	12	626
Shelburne—															
1917	1,625.28	28,451	133	18	1.02	5.7	1,362.06	23,807	74	27	1.53	5.7	620.14	4	210
1918	1,749.09	31,280	142	19	1.06	5.5	1,416.45	25,820	76	28	1.57	5.4	2,465.07	5	223
1919	2,046.30	40,546	170	20	1.00	5.0	1,645.38	32,215	76	35	1.80	5.1	2,606.52	3	249
1920	2,616.47	42,896	182	19	1.18	6.1	2,084.51	34,331	81	35	2.14	6.1	4,086.32	9	272
1921	3,754.83	60,112	206	24	1.52	6.2	2,862.25	48,759	80	51	2.98	5.9	4,460.29	7	293
1922	4,441.32	68,766	221	27	1.74	6.4	2,829.00	46,235	78	49	2.98	6.1	3,429.94	9	308
1923	4,535.60	68,639	234	24	1.61	6.6	3,545.17	49,900	86	48	3.43	7.1	3,678.96	8	328









## STATEMENT "D"—Continued

Comparative Statistics Relating to the Supply of Electrical Energy for Domestic Service, for Commercial Light Service and for Power Service in Hydro Municipalities for Each Year Since the Inauguration of Service up to the Year 1923. Showing Growth in Number of Consumers, in Revenue and in Consumption, and Reductions in Net Cost per Kilowatt-Hour

Municipality	Year	Domestic service						Commercial light						Power						
		Revenue	Consumption	Number of consumers	Avg monthly consumption	Average monthly bill	Net cost per kw-hr.	Net cost prior to Hydro	Revenue	Consumption	Number of consumers	Avg monthly consumption	Average monthly bill	Net cost per kw-hr.	Net cost prior to Hydro	Revenue	Number of consumers	Average horsepower	Average cost per horsepower	Total number of consumers
Sunderland—																				
	1915	\$ 794.83	7,714	57	11	1.06	9.8	12.5	939.85	9,644	36	45	1.92	9.0	12.5	211.86	1	.....	.....	93
	1916	752.64	10,369	61	15	1.29	8.3	.....	840.22	10,108	37	45	1.94	7.4	.....	731.14	2	34	21.50	99
	1917	858.64	11,631	58	15	1.33	8.4	.....	735.19	7,867	31	22	2.11	9.3	.....	825.04	1	30	27.50	87
	1918	988.01	14,103	65	17	1.32	8.0	.....	905.32	10,497	32	24	2.36	9.8	.....	1,001.01	1	30	33.37	97
	1919	1,123.51	17,349	71	17	1.32	8.0	.....	1,060.24	10,876	34	27	2.60	9.7	.....	790.48	1	30	26.35	104
	1920	1,580.01	16,233	79	18	1.66	9.1	.....	1,398.04	9,850	35	23	3.33	14.2	.....	814.60	2	30	27.15	114
	1921	1,851.55	16,376	79	17	1.95	11.4	.....	1,523.73	14,023	36	34	3.63	10.9	.....	755.72	2	35	22.90	116
	1922	1,858.95	20,757	80	17	1.94	11.4	.....	1,441.09	12,508	39	26	3.07	11.5	.....	804.86	2	36	22.35	130
	1923	1,879.48	.....	89	19	1.75	9.0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tara—																				
	1918	428.0	9,807	45	14	.....	.....	None	392.66	.....	34	.....	.....	.....	None	352.49	1	.....	.....	80
	1919	601.28	16,329	59	14	85	6.1	.....	694.94	11,526	38	24	1.52	6.0	.....	519.73	3	27	19.24	100
	1920	1,093.36	22,922	71	19	1.28	6.7	.....	1,047.54	13,127	42	26	2.08	8.0	.....	950.40	5	46	20.66	118
	1921	1,824.4	.....	81	24	2.54	7.9	.....	1,787.89	15,682	39	34	3.82	11.4	.....	1,134.69	6	.....	.....	126
	1922	2,226.18	.....	84	.....	.....	.....	.....	1,977.69	.....	37	.....	.....	.....	.....	1,120.91	5	32	35.03	126
	1923	2,074.95	.....	.....	.....	.....	.....	.....	1,573.28	.....	.....	.....	.....	.....	.....	1,102.58	4	39	28.27	.....
Tavistock—																				
	1917	1,155.03	13,089	80	10	92	9.6	10	1,396.92	11,047	64	16	1.46	9.2	10	1,915.65	2	.....	.....	146
	1918	1,258.12	21,845	114	10	95	6.6	.....	1,014.49	18,574	58	26	1.36	5.3	.....	10,303.82	3	284	36.29	175
	1919	1,442.02	31,384	126	14	95	5.7	.....	991.26	21,082	60	26	1.32	4.6	.....	10,133.62	4	305	33.23	190
	1920	1,806.64	49,433	139	19	1.08	5.7	.....	1,015.70	39,706	64	29	1.39	2.7	.....	8,593.94	4	298	28.84	207
	1921	2,184.08	83,513	155	27	1.17	4.4	.....	1,069.78	48,305	64	52	1.46	2.3	.....	8,593.78	4	300	28.64	223
	1922	3,131.34	114,021	201	39	1.47	3.7	.....	1,129.37	48,352	62	61	1.67	2.7	.....	6,626.92	4	249	26.61	267
	1923	3,609.74	.....	200	47	1.50	3.1	.....	1,323.87	.....	66	61	1.67	2.7	.....	2,744.62	4	159	17.33	270



## STATEMENT "D"—Continued

Comparative Statistics Relating to the Supply of Electrical Energy for Domestic Service, for Commercial Light Service and for Power Service in Hydro Municipalities for Each Year Since the Inauguration of Service up to the Year 1923. Showing Growth in Number of Consumers, in Revenue and in Consumption, and Reductions in Net Cost per Kilowatt-Hour

Municipality	Year	Domestic service							Commercial light							Power				Total number of consumers	
		Revenue	Consumption	Number of consumers	Av'g monthly consumption	Average monthly bill	Net cost per kw-hr.	Net cost prior to Hydro	Revenue	kw-hrs.	Consumption	Number of consumers	Av'g monthly consumption	Average monthly bill	Net cost per kw-hr.	Net cost prior to Hydro	Revenue	Number of consumers	Average horsepower		Average cost per horsepower
<b>Thornton</b>																					
1919		390.38		31					158.36			10									41
1920		564.08		33					198.24			10									43
1921		688.24	6,683	34	161.69	10.3			306.20	3,250		11	242.32	9.4							55
1922		786.81	7,816	38	181.82	10.1			330.93	2,431		10	202.75	13.2							48
1923		879.09	7,916	38	171.92	11.1			259.09	2,031		10	162.15	12.7							
<b>Thorold</b>																					
1922		12,100.76	558,497	985	471.02	2.2			4,986.80	234,313		172	1132.41	2.1				2,590.78	5	89	29.51
1923		13,781.50	720,435	1,026	581.11	1.9			5,453.59	344,467		178	1612.55	1.6				5,598.54	9	144	38.87
<b>Tilbury</b>																					
1915		979.57		123					1,476.53			67				10					190
1916		1,507.37	21,483	127	141.00	6.5			2,071.77	32,612		79	372.36	4.5				149.60	2		218
1917		1,555.59	20,600	132	131.00	7.6			2,038.56	27,335		80	292.12	7.5				423.28	5	22	19.24
1918		1,652.71	23,964	135	151.02	6.9			1,834.59	26,534		75	292.04	6.8				1,402.53	4	56	25.15
1919		1,918.60	30,305	143	181.12	6.3			2,279.49	34,939		91	322.09	6.5				1,889.69	5	77	24.54
1920		2,372.09	35,314	144	201.37	6.7			2,048.21	44,668		91	412.43	5.9				1,711.87	6	85	20.14
1921		3,279.86	50,279	193	221.42	6.5			3,457.17	54,960		89	513.24	6.3				4,745.94	8	168	28.25
1922		4,201.29	67,899	220	251.69	6.2			4,265.94	67,317		88	634.04	6.3				6,640.84	10	256	25.90
1923		4,551.36	96,109	255	311.48	5.6			4,461.85	76,723		97	653.83	5.8				8,799.72	11	333	26.42
<b>Tillsonburg</b>																					
1912		3,233.92		200					3,350.91			128				11+25		3,283.75	6		334
1913		2,796.57	29,115	254	101.03	9.6			4,677.38	66,049		143	412.87	7.8				4,763.15	17		414
1914		3,367.74	45,937	300	141.02	7.3			4,579.37	70,265		160	382.52	6.5				6,303.09	16		476



1915	3,203.51	55,346	348	14	83	5.7	4,236.42	74,564	161	382.19	5.7	5,619.15	15	524
1916	4,009.67	72,975	375	18	1.02	5.5	4,493.41	95,326	188	462.14	4.7	5,692.05	17	580
1917	5,237.69	97,606	400	21	1.13	5.4	4,758.14	96,044	165	452.25	5.0	7,935.07	20	585
1918	4,534.89	77,751	407	16	93	5.8	5,377.01	104,830	166	532.70	5.1	16,717.31	22	595
1919	4,971.07	110,613	441	21	94	4.0	5,573.12	136,175	178	642.61	4.1	23,917.76	22	641
1920	6,417.45	159,319	480	28	1.16	4.0	6,077.79	151,422	178	712.84	4.0	18,378.45	19	677
1921	7,160.17	178,122	527	28	1.13	4.0	6,679.06	174,255	189	772.94	3.8	10,084.24	19	735
1922	7,980.94	213,716	566	32	1.22	3.7	7,177.19	163,421	196	714.11	4.4	9,916.25	22	784
1923	8,947.95	288,605	633	38	1.18	3.1	7,538.05	205,886	172	993.65	3.6	13,045.34	24	829
Toronto—														
1912	201,554.74	11,441	11,441	25	1.25	4.5	233,739.04	6,156,073	*	4.09	3.8	225,451.55	518	11,959
1913	190,376.89	4,220,270	16,519	25	1.25	4.5	305,534.31	7,683,589	4,764	116.4	3.9	347,708.88	1,037	22,320
1914	289,645.45	6,240,882	23,181	27	1.04	3.9	291,907.92	10,243,496	6,276	126.3	2.8	483,681.15	1,494	30,951
1915	331,807.18	8,599,559	29,724	27	1.22	3.9	272,243.06	11,491,577	7,406	131.3	2.4	575,239.17	1,504	38,455
1916	225,181.19	11,250,291	34,347	29	89	3.1	297,459.72	12,763,343	9,341	126.2	2.3	612,918.32	1,707	43,460
1917	414,043.17	15,341,150	41,358	34	91	2.7	294,653.18	13,025,770	9,113	117.2	2.6	734,294.61	2,028	52,727
1918	451,824.59	18,068,947	42,558	36	89	2.5	382,167.17	17,197,460	10,510	136.3	2.2	907,886.95	2,225	53,705
1919	560,912.00	22,799,666	51,242	37	91	2.5	507,285.14	22,452,782	11,307	171.3	2.2	1,144,453.76	2,225	63,977
1920	729,364.33	33,567,358	57,685	51	1.11	2.2	699,144.27	24,954,872	12,401	168.4	2.8	1,158,639.12	2,390	71,382
1921	865,908.45	38,662,078	67,019	48	1.08	2.2	852,286.95	30,402,527	13,684	198.5	2.7	1,236,518.60	2,488	81,908
1922	1,073,539.05	51,689,146	76,985	59	1.24	2.1	1,776,961.73	44,149,870	15,702	234.9	4.0	1,368,884.30	2,659	93,328
1923	1,817,880.36	84,345,839	102,040	69	1.48	2.1						2,296,896.33	2,596	120,338
Toronto Twp.—														
1918	13,180.75		280								None			280
1919	14,566.15		258											258
1920	18,641.08		398											410
1921	25,042.87		573											585
1922	27,068.08	435,808	798											809
1923	39,423.13		925									9,242.53	13	
Tottenham—														
1919	1,323.68	10,434	79	11	1.40	12.7	984.93	9,125	46	171.78	10.8			125
1920	1,528.86	19,560	82	19	1.55	7.8	1,011.40	11,000	41	232.09	9.8			123
1921	2,181.09	25,684	103	21	1.77	8.5	1,335.34	13,089	47	232.37	10.2			152
1922	2,479.22	29,904	106	24	1.98	8.3	1,445.59	15,209	52	252.41	9.5	217.57	2	161
1923	2,572.00	32,089	112	23	1.91	8.0	1,317.92	13,431	50	222.19	9.8	665.93	3	165
Uxbridge—														
1922	589.77		127				669.36		75			19.94	8	210
1923	4,320.73	44,039	178	20	2.02	9.8	4,131.97	39,357	76	444.54	10.4	1,424.26	11	

## STATEMENT "D"—Continued

Comparative Statistics Relating to the Supply of Electrical Energy for Domestic Service, for Commercial Light Service and for Power Service in Hydro Municipalities for Each Year Since the Inauguration of Service up to the Year 1923. Showing Growth in Number of Consumers, in Revenue and in Consumption, and Reductions in Net Cost per Kilowatt-Hour

Municipality	Year	Domestic service						Commercial light						Power								
		Revenue	Consumption	Number of consumers	Avg monthly consumption	Average monthly bill	Net cost per kw-hr.	Net cost prior to Hydro	Revenue	kw-hrs.	Consumption	Number of consumers	Avg monthly consumption	Average monthly bill	Net cost per kw-hr.	Net cost prior to Hydro	Revenue	Number of consumers	Average horsepower	Average cost per horsepower	Total number of consumers	
Vaughan	1918	\$ c.	kw-hrs.	30	kw-hr	\$ c.	cents	cents	\$	c.	kw-hrs.	6	kw-hr	\$ c.	cents	cents	\$	c.	3	.....	.....	39
	1919	334.57	.....	42	14	1.09	7.9	None	124.50	.....	1,490	8	14	1.65	11.8	None	562.17	.....	7	86	22.94	57
	1920	549.48	6,945	47	16	1.44	8.9	.....	150.03	.....	1,682	10	16	1.41	9.1	.....	1,972.79	.....	6	79	25.06	63
	1921	763.80	8,514	53	16	1.80	11.1	.....	152.45	.....	2,121	10	17	1.96	11.1	.....	2,059.19	.....	4	83	31.73	67
	1922	1,145.99	10,309	53	19	2.26	11.7	.....	234.78	.....	2,915	13	21	2.32	10.9	.....	2,633.87	.....	4	82	31.48	70
	1923	1,436.54	12,225	63	.....	2.20	.....	.....	320.49	.....	.....	14	.....	2.29	.....	.....	2,581.59	.....	5	84	37.49	82
	1,677.29	.....	.....	.....	.....	.....	.....	385.28	.....	.....	.....	.....	.....	.....	.....	.....	3,149.36	.....	.....	.....	.....	
Victoria Harbour—	1915	105.79	.....	56	.....	.....	.....	Flat	117.85	.....	.....	34	.....	.....	.....	Flat	.....	.....	.....	.....	.....	90
	1916	642.29	.....	65	.....	.....	.....	.....	1,171.37	.....	.....	31	.....	.....	.....	.....	.....	.....	.....	.....	96	
	1917	666.04	9,230	69	11	80	7.2	.....	1,130.48	.....	11,721	38	26	2.48	9.6	.....	.....	.....	.....	.....	107	
	1918	735.97	12,403	71	15	86	5.9	.....	1,069.34	.....	13,830	27	42	3.30	7.7	.....	.....	.....	.....	.....	98	
	1919	931.86	15,485	78	16	98	6.0	.....	1,299.03	.....	17,292	33	44	3.28	7.5	.....	.....	.....	.....	.....	111	
	1920	1,222.63	26,137	89	26	1.21	4.9	.....	1,470.72	.....	23,053	39	53	3.40	6.3	.....	.....	.....	.....	.....	128	
	1921	1,593.60	29,255	97	25	1.37	5.4	.....	1,607.34	.....	32,090	36	74	3.72	5.0	.....	.....	.....	.....	.....	133	
	1922	1,943.27	26,107	116	28	1.52	5.4	.....	1,769.22	.....	18,860	40	41	3.88	9.4	.....	.....	.....	.....	.....	156	
	1923	2,103.49	34,126	127	22	1.37	6.1	.....	1,434.96	.....	22,761	38	49	3.14	6.3	.....	.....	.....	.....	.....	.....	
	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	
Walkerville—	1914	3,037.96	.....	790	.....	.....	.....	15—5	1,492.84	.....	.....	175	.....	.....	.....	15-10-5	6,042.11	.....	75	.....	.....	1,040
	1915	13,036.98	241,771	1,159	21	1.12	5.4	.....	7,836.93	.....	157,198	195	70	3.49	4.4	.....	39,523.81	.....	72	.....	.....	1,421
	1916	18,813.06	391,629	1,513	27	1.34	4.8	.....	12,104.72	.....	309,727	216	126	4.61	3.9	.....	77,003.07	.....	75	.....	.....	1,804
	1917	23,683.25	483,770	1,883	24	1.16	4.9	.....	15,350.67	.....	358,594	225	136	5.81	4.3	.....	80,075.42	.....	71	.....	.....	2,179
	1918	27,570.83	532,075	1,970	23	1.16	5.2	.....	16,116.67	.....	372,896	230	137	5.90	4.3	.....	101,125.84	.....	67	.....	.....	2,267





## STATEMENT "D"—Continued

Comparative Statistics Relating to the Supply of Electrical Energy for Domestic Service, for Commercial Light Service and for Power Service in Hydro Municipalities for Each Year Since the Inauguration of Service up to the Year 1923. Showing Growth in Number of Consumers, in Revenue and in Consumption, and Reductions in Net Cost per Kilowatt-Hour

Municipality	Year	Domestic service						Commercial light						Power				Total number of consumers			
		Revenue	Consumption	Number of consumers	Avg monthly consumption	Average monthly bill	Net cost per kw-hr.	Net cost prior to Hydro	Revenue	Consumption	Number of consumers	Avg monthly consumption	Average monthly bill	Net cost per kw-hr.	Net cost prior to Hydro	Revenue	Number of consumers		Average horsepower	Average cost per horsepower	
Waterloo—																					
	1912	4,057.46	69,576	239	21	1.27	6.1	12+25	4,524.93	.....	87,718	112	62	3.58	5.8	12+25	11,545.93	35	.....	.....	386
	1913	4,263.66	85,199	321	19	1.05	5.5	.....	5,098.42	.....	98,924	125	59	2.90	5.0	.....	14,970.14	44	.....	.....	490
	1914	4,723.94	106,570	430	19	94	5.1	.....	4,825.22	.....	107,821	153	57	2.80	4.9	.....	13,282.14	51	.....	.....	634
	1915	5,401.82	145,196	524	22	81	3.8	.....	5,284.87	.....	130,418	162	69	2.54	3.6	.....	15,125.32	53	.....	.....	739
	1916	5,454.60	195,770	592	25	85	3.4	.....	4,750.09	.....	144,543	150	55	2.79	3.5	.....	17,905.45	50	.....	.....	792
	1917	6,562.98	232,962	735	26	81	3.1	.....	5,097.38	.....	176,953	155	55	2.79	3.5	.....	18,773.17	59	.....	.....	908
	1918	7,157.81	305,803	830	31	88	2.9	.....	4,738.43	.....	234,843	161	92	2.78	3.0	.....	20,613.60	66	.....	.....	940
	1919	8,771.46	512,612	995	47	1.09	2.3	.....	5,347.03	.....	298,664	169	118	2.77	2.3	.....	23,399.07	66	.....	.....	1,057
	1920	11,943.47	653,123	1,091	50	1.14	2.3	.....	5,488.04	.....	335,694	172	145	3.45	2.4	.....	27,011.12	68	.....	.....	1,232
	1921	14,931.02	990,570	1,200	72	1.40	1.9	.....	7,125.48	.....	412,138	178	160	3.80	2.4	.....	26,882.41	68	.....	.....	1,331
	1922	19,267.15	1,693,394	1,275	110	1.60	1.4	.....	8,090.25	.....	.....	185	190	4.09	2.2	.....	33,108.68	52	.....	.....	1,430
	1923	24,528.74	.....	.....	.....	.....	.....	.....	9,101.69	.....	.....	.....	.....	.....	.....	.....	41,540.47	72	.....	.....	1,532
Watford—																					
	1918	1,544.91	20,173	108	16	1.20	7.6	Flat	1,324.56	.....	18,173	70	21	1.57	7.2	10+25	1,542.04	4	.....	64.24.09	182
	1919	1,905.65	23,042	118	16	1.34	8.3	.....	1,779.86	.....	16,293	60	23	2.47	10.9	.....	2,154.95	5	.....	63.34.20	183
	1920	2,332.72	26,686	136	18	1.53	.....	.....	2,160.32	.....	20,679	70	27	2.76	10.5	.....	2,305.80	7	.....	80.29.00	213
	1921	2,873.44	30,714	154	17	1.55	9.3	.....	2,620.52	.....	29,233	76	32	2.87	9.0	.....	2,808.30	8	.....	85.33.04	238
	1922	3,118.16	36,865	201	18	1.47	8.5	.....	2,880.90	.....	30,769	76	34	3.16	9.4	.....	3,227.88	9	.....	97.33.27	286
	1923	3,740.23	59,745	215	23	1.44	6.2	.....	2,856.12	.....	29,326	73	33	3.26	9.7	.....	2,727.08	8	.....	82.33.25	296
Waubaushe—																					
	1915	516.34	7,296	49	.....	.....	7.0	None	220.50	.....	2,979	15	.....	.....	7.7	None	32.28	1	.....	.....	65
	1916	646.58	8,233	58	13	1.01	7.9	.....	496.47	.....	7,534	20	36	2.37	6.6	.....	49.52	1	.....	.....	79
	1917	691.56	8,602	64	11	94	8.0	.....	455.62	.....	8,588	17	40	2.23	5.3	.....	36.85	1	.....	.....	82
	1918	702.19	10,124	64	13	91	6.9	.....	494.76	.....	10,988	16	57	2.58	4.5	.....	21.49	1	.....	.....	81
	1919	735.40	11,457	66	14	93	6.7	.....	266.34	.....	4,951	17	24	1.31	5.4	.....	41.10	2	.....	.....	85

1920	1,050.26	13,959	71	17	1.28	7.5	478.46	7,344	18	28	2.49	6.4	70.49	1	514.10	94
1921	1,324.12	14,023	69	22	1.60	9.4	640.36	7,479	16	37	3.34	8.5	112.73	3	10.....	88
1922	1,368.50	18,011	70	22	1.63	7.6	557.83	9,035	17	49	2.91	6.2	167.97	3	19.....	90
1923	1,315.55	19,717	90	18	1.21	6.6	483.29	8,190	19	35	2.11	5.9	270.17	4	2510.80	113
Wardville—																
1922	794.73	5,541	41	11	1.62	14.3	382.33	3,052	15	17	2.12	12.5	.....	.....	.....	56
1923	803.19	5,346	43	10	1.55	15.0	418.46	3,699	16	19	2.17	11.3	.....	.....	.....	59
Wellesley—																
1917	642.52	7,181	68	9	79	9.0	353.33	3,393	28	10	1.05	10.4	2,784.78	3	8233.96	99
1918	677.43	8,028	65	10	87	8.4	415.73	7,198	25	24	1.38	5.8	4,351.11	3	12036.26	93
1919	747.84	9,710	69	12	90	7.7	524.60	12,542	27	39	1.62	4.2	4,253.22	3	11935.74	99
1920	857.83	11,307	76	12	98	7.6	524.94	11,270	30	31	1.45	4.7	4,180.31	3	1835.40	109
1921	1,065.38	14,638	82	15	1.08	7.3	568.02	7,893	30	22	1.58	7.2	4,003.07	4	11734.21	116
1922	1,218.98	19,222	88	19	1.20	6.3	626.02	14,624	35	38	1.63	4.3	4,332.93	5	11936.41	128
1923	1,363.47	24,229	91	22	1.24	6.0	820.60	17,561	33	44	2.07	4.6	4,790.83	3	12438.63	127
Welland—																
1913	1,369.67	.....	408	.....	.....	.....	558.46	.....	53	.....	.....	.....	4,307.21	18	.....	479
1914	4,411.20	117,328	492	27	82	3.7	1,676.78	64,449	53	100	2.64	2.6	8,305.71	23	.....	568
1915	4,643.16	154,534	467	21	81	3.0	1,600.79	69,340	57	105	2.42	2.3	38,541.88	23	.....	547
1916	4,800.06	154,706	536	26	79	3.1	1,580.48	94,582	75	141	2.40	1.7	78,184.81	24	.....	635
1917	5,584.56	243,723	593	36	82	2.3	2,034.85	156,083	94	155	2.02	1.3	96,449.82	23	5,985.16.12	710
1918	7,662.93	316,947	767	38	93	2.4	2,593.74	187,821	120	170	2.02	1.1	93,972.63	28	.....	.....
1919	11,262.98	642,963	985	54	95	1.7	3,678.46	329,736	145	190	2.11	1.1	60,784.43	33	2,282.....	1,163
1920	14,065.49	895,770	1,092	72	1.12	1.6	5,126.13	350,096	172	183	2.69	1.4	55,825.21	34	4,284.....	1,298
1921	18,307.67	1,291,322	1,324	81	1.15	1.4	5,955.83	444,103	211	175	2.35	1.3	43,112.95	44	4,192.10.28	1,579
1922	21,657.48	1,542,357	1,325	97	1.36	1.4	5,827.96	469,884	213	185	2.29	1.2	42,586.24	51	3,285.12.66	1,589
1923	26,285.40	1,696,274	1,440	98	1.52	1.5	7,698.72	471,395	259	151	2.47	1.6	31,693.68	56	1,583.20.02	.....
Wellington—																
1920	1,737.62	17,084	125	11	1.15	10.1	1,362.42	17,012	43	33	2.61	8.0	1,503.26	3	5129.48	.....
1921	2,611.66	34,813	166	17	1.27	7.5	1,199.05	15,195	46	27	2.10	7.8	1,736.95	1	56.....	.....
1922	3,092.49	40,654	176	20	1.51	7.6	1,340.74	17,102	53	29	2.23	7.8	1,842.93	5	5831.77	234
1923	3,089.36	50,118	190	21	1.35	6.1	1,948.27	28,567	42	56	3.86	6.8	2,300.79	5	7032.00	237
West Lorne—																
1917	578.98	.....	54	.....	.....	.....	602.00	.....	40	.....	.....	.....	.....	.....	.....	94
1918	759.87	6,884	66	9	96	11.0	649.68	7,917	44	15	1.23	8.2	59.38	1	.....	111
1919	991.90	.....	66	.....	.....	.....	873.46	.....	44	.....	.....	.....	360.44	1	845.05	111
1920	1,286.61	.....	.....	.....	.....	.....	1,253.45	.....	.....	.....	.....	.....	4,838.27	.....	.....	111
1921	1,630.54	21,954	110	17	1.23	7.5	1,356.84	21,503	54	33	2.09	6.3	6,008.05	3	15738.27	167
1922	1,707.26	.....	.....	.....	.....	.....	1,469.24	.....	.....	.....	.....	.....	6,413.57	.....	.....	.....
1923	1,828.90	26,729	143	15	1.06	6.8	1,662.45	27,165	55	41	2.25	6.1	7,192.16	3	20732.86	.....

## STATEMENT "D"—Continued

Comparative Statistics Relating to the Supply of Electrical Energy for Domestic Service, for Commercial Light Service and for Power Service in Hydro Municipalities for Each Year Since the Inauguration of Service up to the Year 1923. Showing Growth in Number of Consumers, in Revenue and in Consumption, and Reductions in Net Cost per Kilowatt-Hour

Municipality	Year	Domestic service						Commercial light						Power						
		Revenue	Consumption	Number of consumers	Avg monthly consumption	Average monthly bill	Net cost per kw-hr.	Net cost prior to Hydro	Revenue	Consumption	Number of consumers	Avg monthly consumption	Average monthly bill	Net cost per kw-hr.	Net cost prior to Hydro	Revenue	Number of consumers	Average horsepower	Average cost per horsepower	Total number of consumers
Weston—	1912	\$ 3,979.81	kw-hrs. ....	225	kw-hr	\$ c.	cents	7.2+	\$ 750.00	kw-hrs. ....	15	kw-hr	\$ c.	cents	7.2+	\$ 1,674.28	4	.....	.....	344
	1913	4,117.20	.....	360	.....	.....	.....	22.5	1,475.74	.....	35	.....	.....	.....	22.5	6,166.97	6	.....	.....	400
	1914	3,741.84	79,766	352	17	80	4.7	.....	1,599.97	26,774	78	40	2.38	6.0	.....	4,958.59	10	.....	.....	440
	1915	4,407.36	96,186	441	21	93	4.6	.....	1,305.90	27,564	90	27	1.30	4.7	.....	4,798.33	9	.....	.....	540
	1916	5,477.65	135,272	475	25	1.00	.....	.....	1,407.31	31,898	88	30	1.13	.....	.....	5,202.84	11	.....	.....	574
	1917	5,942.00	155,303	542	24	97	3.8	.....	1,467.63	35,800	83	35	1.44	4.1	.....	16,420.90	12	850	19.32	637
	1918	6,288.15	.....	.....	.....	.....	.....	.....	1,403.92	.....	.....	.....	.....	.....	.....	19,578.73	11	882	22.19	.....
	1919	7,453.63	310,258	667	39	93	2.4	.....	1,819.82	65,319	108	50	1.40	2.8	.....	20,861.85	17	936	22.29	792
	1920	9,047.65	363,877	745	42	1.06	2.2	.....	2,125.38	36,279	104	.....	.....	.....	.....	25,110.01	13	927	27.00	862
	1921	10,086.61	626,817	1,030	51	82	1.6	.....	2,183.96	76,122	120	53	1.51	2.9	.....	19,057.66	14	999	19.08	1,164
	1922	14,808.44	724,340	1,150	55	1.13	2.0	.....	2,484.85	95,766	130	64	1.66	2.6	.....	27,737.15	16	1,276	21.72	1,296
	1923	21,369.90	1,104,178	1,048	87	1.70	1.9	.....	3,375.89	135,817	135	83	2.08	2.4	.....	36,552.82	17	1,593	22.94	1,200
Williamsburg—	1915	403.72	.....	44	.....	.....	.....	None	139.26	.....	9	.....	.....	.....	None	.....	1	.....	.....	54
	1916	568.66	7,392	41	14	1.11	7.7	.....	224.29	3,934	9	36	2.08	5.7	.....	285.73	1	.....	.....	51
	1917	551.07	7,003	42	16	1.09	7.9	.....	280.09	3,347	10	30	2.33	8.4	.....	256.38	1	9	28.48	53
	1918	547.71	6,798	44	13	1.04	8.1	.....	313.21	3,915	11	30	2.37	8.0	.....	205.51	1	15	13.70	56
	1919	785.76	7,334	42	15	1.49	10.0	.....	312.45	5,981	14	36	1.86	5.2	.....	334.03	2	18	18.50	58
	1920	759.05	7,842	41	16	1.54	9.7	.....	253.05	4,506	7	41	1.75	5.5	.....	317.42	2	22	14.40	50
	1921	926.67	.....	47	.....	.....	.....	.....	439.04	.....	12	.....	.....	.....	.....	230.38	1	9	25.60	70
	1922	1,391.67	9,985	46	.....	.....	.....	.....	241.37	5,674	14	.....	.....	.....	.....	257.92	1	14	18.42	61
	1923	893.22	11,636	45	21	1.65	7.6	.....	530.32	2,234	16	11	2.81	2.3	.....	217.32	1	16	13.58	.....



Winchester—																			
1914	1,672.09	.....	.....	.....	.....	1,300.00	.....	17,550	50	.....	2.23	7.6	.....	15	.....	.....	.....	.....	153
1915	1,698.40	28,610	.....	.....	.....	1,336.85	.....	309,757	30	50	2.23	7.6	.....	15	.....	.....	.....	.....	171
1916	1,812.29	36,931	135	24	1.18	5.4	1,364.47	21,999	46	38	2.37	6.2	.....	15	.....	.....	.....	.....	182
1917	2,330.67	36,311	162	20	1.31	6.4	1,546.53	17,564	47	31	2.58	8.8	.....	15	.....	.....	.....	.....	210
1918	2,595.85	44,875	174	21	1.24	5.8	1,493.85	20,577	47	36	2.65	7.3	.....	15	.....	.....	.....	.....	222
1919	3,086.06	62,282	182	29	1.41	4.9	1,690.89	26,445	47	47	2.98	6.4	.....	15	.....	.....	.....	.....	231
1920	3,808.56	83,871	192	36	1.61	4.5	2,242.15	38,060	47	66	4.00	5.8	.....	15	.....	.....	.....	.....	241
1921	4,987.06	80,842	212	32	1.96	6.2	2,925.86	29,833	49	51	4.97	9.8	.....	15	.....	.....	.....	.....	263
1922	5,754.06	77,677	230	29	2.17	7.4	2,731.95	31,810	52	53	4.55	8.6	.....	15	.....	.....	.....	.....	284
1923	6,124.53	89,708	253	29	2.01	6.8	2,558.82	33,050	58	61	3.67	7.7	.....	15	.....	.....	.....	.....	313
Windsor—																			
1914	3,143.41	.....	.....	.....	.....	1,107.38	.....	.....	257	.....	.....	.....	.....	8	.....	.....	.....	.....	2,069
1915	23,161.57	468,386	2,519	18	.....	.....	12,009.99	309,757	377	82	3.16	3.9	.....	8	.....	.....	.....	.....	2,939
1916	35,565.79	726,442	3,180	21	1.04	4.9	16,831.60	465,683	439	95	3.44	3.6	.....	8	.....	.....	.....	.....	3,685
1917	48,913.80	1,087,029	3,882	26	1.15	4.5	21,257.15	590,977	471	108	3.89	3.6	.....	8	.....	.....	.....	.....	4,450
1918	60,080.51	1,422,096	4,415	27	1.13	4.2	21,751.80	626,579	484	108	3.75	3.5	.....	8	.....	.....	.....	.....	5,000
1919	78,038.66	1,990,644	5,383	31	1.21	3.9	27,032.01	893,920	584	128	3.86	3.0	.....	8	.....	.....	.....	.....	6,103
1920	144,209.01	4,496,116	8,700	53	1.71	3.2	75,244.64	2,340,661	1,220	216	7.20	3.2	.....	8	.....	.....	.....	.....	10,193
1921	181,822.04	6,000,528	9,731	51	1.56	3.0	99,612.26	3,235,758	1,448	186	5.73	3.1	.....	8	.....	.....	.....	.....	11,520
1922	210,050.86	8,197,159	10,450	68	1.73	2.6	103,421.01	3,799,633	1,472	217	5.90	2.7	.....	8	.....	.....	.....	.....	12,243
1923	358,709.20	13,627,976	12,021	94	2.48	2.6	123,631.38	5,229,797	1,441	303	7.14	2.3	.....	8	.....	.....	.....	.....	13,773
Wingham—																			
1922	7,072.58	87,067	384	19	1.53	8.1	7,648.64	70,902	156	38	4.09	10.8	.....	8	.....	.....	.....	.....	560
1923	8,068.34	132,612	410	26	1.63	6.0	7,663.32	107,274	156	57	4.09	7.1	.....	8	.....	.....	.....	.....	589
Woodbridge—																			
1915	367.49	4,878	42	.....	.....	.....	443.53	4,911	33	.....	.....	9.0	.....	None	.....	.....	.....	.....	77
1916	507.10	7,059	58	13	89	7.0	556.82	13,356	33	17	1.40	7.9	.....	None	.....	.....	.....	.....	98
1917	698.53	10,180	69	14	92	6.9	579.56	17,026	35	33	1.42	4.3	.....	None	.....	.....	.....	.....	110
1918	809.54	12,013	74	13	91	6.7	590.37	10,263	34	25	1.45	5.8	.....	None	.....	.....	.....	.....	117
1919	905.44	14,424	85	14	89	6.3	628.07	11,951	40	25	1.31	5.2	.....	None	.....	.....	.....	.....	130
1920	1,053.78	21,867	98	20	95	5.0	672.50	14,602	40	30	1.40	4.6	.....	None	.....	.....	.....	.....	143
1921	1,296.84	28,925	115	21	94	4.5	748.34	18,654	36	43	1.73	4.0	.....	None	.....	.....	.....	.....	156
1922	1,538.54	33,060	137	22	1.02	4.6	854.75	19,044	42	41	1.83	4.5	.....	None	.....	.....	.....	.....	184
1923	1,992.80	47,979	151	26	1.16	4.1	1,083.35	33,370	49	56	1.84	3.2	.....	None	.....	.....	.....	.....	206

STATEMENT "D"—Concluded

Comparative Statistics Relating to the Supply of Electrical Energy for Domestic Service, for Commercial Light Service and for Power Service in Hydro Municipalities for Each Year Since the Inauguration of Service up to the Year 1923. Showing Growth in Number of Consumers, in Revenue and in Consumption, and Reductions in Net Cost per Kilowatt-Hour

Municipality	Year	Domestic service						Commercial light						Power						
		Revenue	Consumption	Number of consumers	Avg monthly consumption	Average monthly bill	Net cost per kw-hr.	Net cost prior to Hydro	Revenue	Consumption	Number of consumers	Avg monthly consumption	Average monthly bill	Net cost per kw-hr.	Net cost prior to Hydro	Revenue	Number of consumers	Average horsepower	Average cost per horsepower	Total number of consumers
Woodstock—																				
1912	4,914.92	.....	.....	464	.....	.....	.....	8+20	13,316.02	.....	265	.....	.....	.....	8+20	21,087.61	43	.....	.....	772
1913	6,495.02	100,000	.....	636	17	1.08	6.5	.....	12,942.32	298,000	282	77	3.95	5.2	.....	20,262.52	55	.....	.....	973
1914	8,807.40	169,054	.....	949	21	1.08	5.2	.....	11,610.14	289,982	337	78	2.12	4.0	.....	19,833.26	57	.....	.....	1,343
1915	10,472.14	230,297	.....	1,099	20	88	4.5	.....	11,718.95	371,787	360	90	2.80	3.1	.....	20,742.18	62	.....	.....	1,521
1916	11,206.71	288,201	.....	1,224	21	80	3.9	.....	12,983.32	503,977	372	114	2.95	2.6	.....	23,721.92	72	.....	.....	1,668
1917	12,216.48	341,160	.....	1,363	22	79	3.6	.....	12,573.08	554,660	387	122	2.76	2.3	.....	23,191.47	66	2,130	.....	1,816
1918	13,901.00	423,453	.....	1,418	25	82	3.3	.....	11,087.25	480,092	369	108	2.50	2.3	.....	24,020.63	68	1,427	16.83	1,855
1919	14,748.02	480,235	.....	1,631	26	75	3.1	.....	12,452.68	567,513	388	128	2.34	2.1	.....	24,473.54	74	1,420	17.23	2,093
1920	22,542.71	923,186	.....	1,850	44	1.08	2.4	.....	14,832.22	720,766	400	153	3.14	2.1	.....	27,048.49	77	1,682	16.08	2,237
1921	25,130.13	1,045,124	.....	2,060	42	1.02	2.4	.....	15,988.83	880,382	409	179	3.26	1.8	.....	28,355.47	76	2,557	11.09	2,545
1922	32,422.51	1,619,099	.....	2,209	63	1.27	2.0	.....	19,033.09	970,453	423	194	3.81	2.0	.....	30,539.85	79	1,976	15.46	2,711
1923	40,323.84	2,416,063	.....	2,314	87	1.66	1.6	.....	20,615.27	1,100,550	421	217	4.08	1.9	.....	40,292.53	84	1,983	20.31	2,819
Woodville—																				
1915	324.34	.....	.....	35	.....	.....	.....	12.5	563.68	.....	28	.....	.....	.....	12.5	1,149.17	3	.....	.....	66
1916	496.52	5,049	.....	41	9	92	9.8	.....	512.07	6,618	24	21	1.62	7.7	.....	1,185.54	3	.....	.....	68
1917	689.70	7,741	.....	51	14	1.25	8.9	.....	591.91	8,512	23	31	2.15	7.0	.....	1,072.28	3	50	21.45	77
1918	722.80	7,373	.....	50	12	1.20	9.8	.....	535.67	6,920	26	26	1.55	7.7	.....	1,152.77	3	50	23.06	79
1919	847.09	10,067	.....	58	15	1.22	8.4	.....	637.49	9,434	27	29	1.97	6.7	.....	1,218.70	3	50	24.36	88
1920	1,423.96	14,060	.....	80	17	1.72	10.1	.....	1,122.12	11,569	25	.....	.....	.....	.....	1,296.75	3	50	.....	.....
1921	2,195.02	20,723	.....	84	21	2.18	10.6	.....	1,330.14	11,580	28	35	3.96	11.5	.....	1,846.69	3	50	36.93	115
1922	2,079.40	20,585	.....	87	20	2.04	10.1	.....	1,341.09	13,940	29	41	3.99	9.6	.....	1,470.02	3	50	29.40	119
1923	2,068.96	27,029	.....	90	25	1.91	7.6	.....	1,346.33	10,579	29	30	3.86	12.7	.....	1,855.48	3	56	33.15	122





## STATEMENT "E"

Street Lighting Installation in Hydro Municipalities, December 31, 1923, showing  
Cost per Year, Cost per Lamp, and Cost per Capita

Municipality	Population	Number of lamps	Size and style of lamps	Cost per lamp per annum	Total cost per annum	Cost per capita
				\$ c.	\$ c.	\$ c.
Acton.....	1,742	{ 104 60 2	80 c.p. s 100 watt m 200 " m	{ 12.00 12.00 12.00 }	2,058.45	1.18
Ailsa Craig.....	547	52	100 " m	12.00	624.00	1.14
Agincourt.....		25	100 " m	18.00	450.00	**
Alexandria.....	2,319	130	100 " m	27.00	3,250.00	1.40
Alliston.....	1,321	{ 97 13	100 " s 100 " m	{ 18.00 18.00 }	1,998.00	1.51
Alvinston.....	659	82	100 " m	26.00	1,918.92	2.09
Ancaster Twp.....		72	100 " m	12.00	864.00	**
Apple Hill.....		23	100 " m	30.00	690.00	**
Arthur.....	1,222	75	100 " m	25.00	1,866.76	1.53
Aylmer.....	2,251	{ 139 12	100 " m 300 " m	{ 16.00 33.00 }	2,620.00	1.16
Ayr.....	817	78	100 " m	14.00	1,102.50	1.35
Baden.....		61	100 " m	10.00	610.00	**
Barrie.....	6,888	511	100 " s	8.00	3,995.27	0.58
Beachville.....		42	100 " m	11.00	495.00	**
Beaverton.....	986	81	100 " m	14.00	1,088.34	1.10
Beeton.....	586	62	100 " s	16.00	992.00	1.69
Belle River.....	580	60	100 " m	25.00	1,500.00	2.60
Blenheim.....	1,580	{ 139 13	150 " s 400 " s	{ 15.00 34.00 }	2,527.00	1.60
Bloomfield.....	512	42	100 " s	25.00	1,050.00	2.05
Bolton.....	658	60	100 " m	16.00	960.00	1.46
Bothwell.....	613	77	100 " m	13.00	1,007.39	1.64
Bradford.....	1,028	{ 60 7	100 " s 100 " m	{ 22.00 21.00 }	1,474.20	1.43
Brampton.....	4,407	597	100 " m	7.00	4,178.67	0.95
Brantford.....	31,362	{ 147 3,440 10 11 2	Mag. arcs s 100 watt m 150 " m 200 " m 500 " m	{ 45.00 8.00 9.00 11.00 45.00 }	31,241.70	0.99

s Series system. m Multiple system. \*\*Population not shown in Government statistics.

## STATEMENT "E"—Continued

Street Lighting Installation in Hydro Municipalities, December 31, 1923, showing  
Cost per Year, Cost per Lamp, and Cost per Capita

Municipality	Population	Number of lamps	Size and style of lamps	Cost per lamp per annum	Total cost per annum	Cost per capita
Brantford Twp.....		233	100 watt <i>m</i>	\$ c. 16.00	\$ c. 3,534.32	\$ c. **
Brechin.....		10	100 " <i>m</i>	22.00	224.43	**
Brigden.....		{ 30 25	{ 60 " <i>m</i> 100 " <i>m</i>	{ 15.00 18.00 }	976.66	**
Brockville.....	9,377	{ 506 32 51 15	{ 100 " <i>s</i> 3 Lt. stds. <i>m</i> 5 " <i>m</i> 1 " <i>m</i>	{ 19.00 35.00 45.00 25.00 }	13,553.00	1.45
Burford.....		64	100 watt <i>m</i>	15.00	960.00	**
Burgessville.....		21	100 " <i>m</i>	16.00	336.00	**
Caledonia.....	1,335	110	100 " <i>m</i>	9.00	1,024.20	0.77
Cannington.....	951	71	100 " <i>m</i>	18.00	1,257.00	1.32
Carleton Place...	4,123	232	60 " <i>m</i>	8.00	1,849.34	0.45
Chatham.....	15,084	{ 68 37 83 694 7	{ 500 " <i>s</i> 100 " <i>s</i> 400 " <i>s</i> 100 " <i>s</i> 400 " <i>s</i>	{ 42.00 14.00 34.00 15.00 34.00 }	14,621.35	0.97
Chatsworth.....	287	{ 26 2	{ 150 " <i>m</i> 100 " <i>m</i>	{ 25.50 17.00 }	697.00	2.43
Chesley.....	1,803	108	150 " <i>s</i>	15.00	1,686.28	0.93
Chesterville.....	941	65	100 " <i>m</i>	17.00	1,105.00	1.17
Chippawa.....	1,029	75	100 " <i>m</i>	14.00	1,135.50	1.10
Clinton.....	1,941	{ 143 11 1	{ 100 " <i>s</i> 100 " <i>m</i> 500 " <i>m</i>	{ 12.00 12.00 75.00 }	1,835.41	0.94
Coldwater.....	647	45	100 " <i>m</i>	12.00	540.00	0.83
Collingwood.....	6,237	412	100 " <i>s</i>	9.00	3,881.08	0.62
Comber.....		50	100 " <i>m</i>	15.00	806.25	**
Cookstown.....		56	100 " <i>s</i>	20.00	1,120.00	**
Creemore.....	540	55	100 " <i>m</i>	14.00	610.96	1.13
Dashwood.....		41	100 " <i>m</i>	15.00	620.00	**
Delaware.....		21	100 " <i>m</i>	18.00	378.00	**
Dorchester.....		32	100 " <i>m</i>	13.00	416.00	**
Drayton.....	618	60	100 " <i>m</i>	18.00	1,080.00	1.74

*s* Series system. *m* Multiple system. \*\*Population not shown in Government statistics.

## STATEMENT "E"—Continued

Street Lighting Installation in Hydro Municipalities, December 31, 1923, showing  
Cost per Year, Cost per Lamp, and Cost per Capita

Municipality	Population	Number of lamps	Size and style of lamps	Cost per lamp per annum	Total cost per annum	Cost per capita
Dresden .....	1,456	123	80 watt <i>s</i>	\$ c. 14.00	\$ c. 1,690.50	\$ c. 1.16
Drumbo .....		37	100 " <i>m</i>	14.00	504.00	**
Dublin .....		36	100 " <i>m</i>	20.00	720.00	**
Dundalk .....	725	72	100 " <i>m</i>	12.00	864.00	1.19
Dundas .....	5,100	{ 346 1 3	{ 100 " <i>m</i> 200 " <i>m</i> 40 " <i>m</i>	{ 11.00 16.00 10.80	3,806.60	0.75
Dunnville .....	3,583	{ 202 27	{ 100 c.p. <i>s</i> 600 " <i>s</i>	{ 14.00 65.00	4,617.53	1.29
Durham .....	1,622	99	100 watt <i>s</i>	16.00	1,443.82	0.89
Dutton .....	845	101	100 " <i>m</i>	11.00	1,128.69	1.34
Elmira .....	2,370	182	100 " <i>m</i>	12.00	2,081.00	0.88
Elmvale .....		57	100 " <i>m</i>	14.00	770.00	**
Elmwood .....		23	150 " <i>m</i>	20.00	485.00	**
Elora .....	1,091	93	100 " <i>m</i>	14.00	1,302.25	1.19
Embro .....	463	46	100 " <i>m</i>	18.00	819.43	1.77
Etobicoke Twp. ....		529	100 " <i>m</i>	14.00	6,196.56	**
Exeter .....	1,507	{ 161 23	{ 100 " <i>m</i> 200 " <i>m</i>	{ 10.00 20.00	2,049.94	1.36
Fergus .....	1,762	{ 26 141	{ 150 watt <i>m</i> 100 " <i>m</i>	{ 14.00 14.00	2,002.25	1.14
Flesherton .....	410	46	100 " <i>m</i>	14.00	736.00	1.79
Ford City .....	5,113	143	100 " <i>m</i>	12.00	1,725.33	††
Forest .....	1,422	{ 51 164	{ 100 " <i>m</i> 60 " <i>m</i>	{ 12.00 10.00	2,317.06	1.63
Galt .....	13,332	{ 968 308 8 152 73	{ 75 c.p. <i>s</i> 100 watt <i>m</i> 150 " <i>m</i> 300 " <i>m</i> 500 " <i>m</i>	{ 8.00 12.00 18.00 35.00 40.00	19,872.00	1.49
Georgetown .....	2,098	{ 166 11	{ 100 " <i>m</i> 100 " <i>m</i>	{ 12.00 12.00	2,122.00	†
Glencoe .....	835	120	100 " <i>m</i>	17.00	2,214.00	2.65
Goderich .....	4,108	{ 291 16 8 8	{ 80 " <i>s</i> 3 Lt. stds. <i>m</i> 250 watt <i>m</i> 100 " <i>m</i>	{ 12.50 40.00 25.00 20.00	4,622.59	1.12
Grand Valley .....	582	52	100 watt <i>m</i>	18.00	938.00	1.59

*s* Series system. *m* Multiple system.

† Includes Glen Williams.

\*\* Population not shown in Government statistics.

†† Part of cost paid in Debenture Charges.



## STATEMENT "E"—Continued

Street Lighting Installation in Hydro Municipalities, December 31, 1923, showing  
Cost per Year, Cost per Lamp, and Cost per Capita

Municipality	Population	Number of lamps	Size and style of lamps		Cost per lamp per annum	Total cost per annum	Cost per capita
Granton.....		32	100 watt	<i>m</i>	\$ c. 13.00	\$ c. 416.00	\$ c. **
Gravenhurst.....	1,621	{ 24 99 15	150 c.p. 100 " 100 "	<i>s</i> <i>s</i> <i>m</i>	{ 15.00 15.00 15.00	2,058.49	1.27
Guelph.....	18,027	{ 1 8 4 1,058 25 1 2 82	32 c.p. 16 " 60 watt 100 " 200 " 400 " 1000 " 300 "	<i>m</i> <i>m</i> <i>m</i> <i>m</i> <i>m</i> <i>m</i> <i>m</i> <i>m</i>	{ 8.50 4.25 4.00 9.00 12.50 25.00 46.50 18.75	11,536.62	0.64
Hagersville.....	1,271	100	100 "	<i>m</i>	8.00	800.00	0.63
Hamilton.....	118,243	{ 7,765 775 150 410 15 26 5 40	100 " 200 " 250 " 500 " 300 " 40 " 60 " 100 "	<i>m</i> <i>m</i> <i>m</i> <i>m</i> <i>m</i> <i>m</i> <i>m</i> <i>m</i>	{ 7.50 11.00 12.00 37.00 18.00 Various Special 12.00	83,195.22	0.70
Hanover.....	2,695	{ 114 14 12	100 c.p. 250 " 200 watt	<i>s</i> <i>s</i> <i>m</i>	{ 20.00 28.00 28.00	2,991.84	1.11
Harriston.....	1,311	66	100 "	<i>s</i>	17.00	1,037.00	0.79
Havelock.....	1,258	{ 63 16	100 " 250 "	<i>s</i> <i>s</i>	{ 27.00 39.00	2,325.00	1.85
Hensall.....	738	65	100 "	<i>m</i>	13.00	975.00	1.32
Hespeler.....	2,853	{ 134 28	100 " 250 "	<i>s</i> <i>s</i>	{ 11.50 17.50	1,982.12	0.69
Highgate.....	417	45	100 "	<i>m</i>	14.00	630.00	1.51
Holstein.....		14	100 "	<i>m</i>	35.00	490.00	**
Huntsville.....	2,316	{ 46 23 53	150 c.p. 400 " 75 watt	<i>s</i> <i>s</i> <i>m</i>	{ 14.00 30.00 11.00	1,898.00	0.82
Ingersoll.....	5,253	{ 306 26	100 c.p. 1000 "	<i>s</i> <i>s</i>	{ 13.00 40.00	5,018.00	0.95
Kemptville.....	1,220	63	100 watt	<i>m</i>	22.00	1,386.00	1.14
Kincardine.....	2,159	{ 122 13 12	100 " 200 " 100 "	<i>s</i> <i>m</i> <i>m</i>	{ 24.00 29.00 18.00	3,521.00	1.63
Kingston.....	22,234	{ 266 96 99	arcs orn. 100 c.p.	<i>s</i> <i>s</i> <i>m</i>	{ 60.00 75.00 20.00	24,878.23	1.12

*s* Series system. *m* Multiple system. \*\*Population not shown in Government statistics.

## STATEMENT "E"—Continued

Street Lighting Installation in Hydro Municipalities, December 31, 1923, showing  
Cost per Year, Cost per Lamp, and Cost per Capita

Municipality	Population	Number of lamps	Size and style of lamps		Cost per lamp per annum	Total cost per annum	Cost per capita
Kirkfield.....		21	100 watt	<i>m</i>	\$ c. 20.00	\$ c. 414.76	\$ c. **
Kitchener.....	22,717	1	600 watt	<i>s</i>	30.00	20,360.58	0.89
		20	250 c.p.	<i>s</i>	17.35		
		6	1000 "	<i>m</i>	36.00		
		2,060	80 c.p.	<i>s</i>	9.00		
		97	200 watt	<i>m</i>	12.00		
		19	500 "	<i>m</i>	30.00		
		52	100 "	<i>s</i>	9.00		
		95	300 "	<i>m</i>	22.00		
		23	250 c.p.	<i>m</i>	17.35		
Lakefield.....	1,193	92	100 watt	<i>m</i>	24.00	2,208.00	1.85
Lambeth.....		1	500 "	<i>m</i>	47.00	590.95	**
		31	100 "	<i>m</i>	16.00		
Lanark.....	575	35	100 "	<i>m</i>	20.00	726.16	1.26
Lancaster.....	612	40	100 "	<i>m</i>	30.00	1,400.00	2.29
Listowel.....	2,429	60	100 "	<i>m</i>	12.50	3,642.00	1.50
		176	60 "	<i>m</i>	12.00		
		27	300 "	<i>m</i>	30.00		
London.....	59,784	289	400 "	<i>s</i>	18.00	37,198.65	0.62
		2,577	100 "	<i>s</i>	11.00		
		94	500 "	<i>m</i>	45.00		
		146	100 "	<i>m</i>	11.00		
Lucan.....	624	67	100 "	<i>m</i>	15.00	1,094.33	1.75
Lucknow.....	887	56	100 "	<i>m</i>	25.00	1,568.00	1.77
Lynden.....		33	100 "	<i>m</i>	14.00	462.00	**
Markdale.....	908	65	100 "	<i>s</i>	10.00	896.26	0.98
Markham.....	970	90	100 "	<i>m</i>	19.00	1,725.00	1.78
Marmora.....	792	40	100 "	<i>m</i>	24.00	1,992.00	2.51
		45	75 "	<i>m</i>	24.00		
Martintown.....		15	100 "	<i>m</i>	25.00	375.00	**
Maxville.....	785	53	100 "	<i>s</i>	35.00	1,798.83	2.29
Merlin.....		35	100 "	<i>m</i>	19.50	658.13	*
Merritton.....	2,589	278	100 "	<i>m</i>	8.00	2,234.00	0.86
Midland.....	7,022	19	750 "	<i>m</i>	35.00	3,910.00	0.56
		336	100 "	<i>s</i>	10.00		
Milton.....	1,900	183	100 "	<i>m</i>	10.00	1,833.32	0.96
Milverton.....	1,054	85	100 "	<i>m</i>	9.00	1,054.00	1.00
		12	200 "	<i>m</i>	17.00		

*s* Series system.  
*m* Multiple system.

\*Operation for less than a year.  
\*\*Population not shown in Government statistics

## STATEMENT "E"—Continued

Street Lighting Installation in Hydro Municipalities, December 31, 1923, showing  
Cost per Year, Cost per Lamp, and Cost per Capita

Municipality	Population	Number of lamps	Size and style of lamps	Cost per lamp per annum	Total cost per annum	Cost per capita
				\$ c.	\$ c.	\$ c.
Mimico.....	4,187	{ 180 62	100 watt 200 " <i>m</i>	{ 13.00 23.00 }	3,750.20	0.89
Mitchell.....	1,699	193	100 " <i>s</i>	11.00	2,123.00	1.25
Moorefield.....		25	100 " <i>m</i>	19.00	475.00	**
Mount Brydges.....		36	100 " <i>m</i>	13.00	468.00	**
Mount Forest....	1,761	194	100 c.p. <i>s</i>	14.00	2,754.14	1.56
Neustadt.....	445	39	100 watts <i>s</i>	25.00	975.00	2.19
Newbury.....	301	46	100 " <i>m</i>	20.00	920.00	3.00
New Hamburg....	1,401	220	100 " <i>m</i>	11.50	2,640.00	1.88
New Toronto....	2,947	{ 59 176 15	200 " <i>m</i> 75 " <i>m</i> 75 " <i>m</i>	{ 27.00 15.00 18.00 }	3,918.49	1.33
Niagara Falls....	15,895	{ 182 743 10	1000 c.p. <i>s</i> 100 " <i>s</i> 600 " <i>s</i>	{ 57.00 12.00 57.00 }	19,190.10	1.21
Niagara-on-the- Lake.....	1,714	193	100 watt <i>m</i>	13.00	2,525.16	1.47
Norwich.....	1,307	{ 115 21	100 " <i>m</i> 400 " <i>m</i>	{ 10.50 42.00 }	2,077.25	1.60
Norwood.....	748	{ 84 2	100 " <i>s</i> 50 " <i>s</i>	{ 23.00 13.50 }	2,115.50	2.83
Oil Springs.....	491	43	100 " <i>m</i>	16.00	687.96	1.40
Omeme.....	485	{ 40 10	100 " <i>s</i> 250 " <i>s</i>	{ 16.00 36.00 }	1,000.00	2.06
Orangeville.....	2,503	{ 56 91	250 " <i>s</i> 100 " <i>s</i>	{ 30.00 24.00 }	3,865.40	1.54
Ottawa.....	112,899	{ 59 400 326 721 374 2,900	arcs 100 c.p. <i>s</i> 400 " <i>s</i> 600 " <i>s</i> 100 watt <i>s</i> 100 " <i>m</i>	{ 45.00 10.00 35.00 45.00 6.00 48c. per ft.	{ 52,220.22 16,021.68	{ 0.46 ***
Otterville.....		25	100 " <i>m</i>	13.00	325.00	**
Owen Sound.....	12,360	{ 37 499 67 34 79 43	150 " <i>s</i> 100 " <i>s</i> 200 " <i>s</i> 400 " <i>s</i> 100 " <i>m</i> 200 " <i>m</i>	{ 14.50 14.00 17.00 24.00 12.00 15.00 }	11,015.75	0.89

*s* Series system. *m* Multiple system. \*\*Population not shown in Government statistics.

\*\*\*Collected as local improvement on frontage basis and not included in average cost.



## STATEMENT "E"—Continued

Street Lighting Installation in Hydro Municipalities, December 31, 1923, showing  
Cost per Year, Cost per Lamp, and Cost per Capita

Municipality	Population	Number of lamps	Size and style of lamps	Cost per lamp per annum	Total cost per annum	Cost per capita
				\$ c.	\$ c.	\$ c.
Palmerston .....	1,780	{ 116 8 2 1	{ 100 watt <i>s</i> 400 " <i>s</i> 300 " <i>m</i> 500 " <i>m</i>	{ 13.00 40.00 40.00 55.00	2,035.00	1.14
Paris .....	4,400	{ 414 13 25	{ 100 " <i>s</i> 400 " <i>s</i> 500 " <i>m</i>	{ 10.50 42.00 52.50	6,095.25	1.38
Parkhill .....	1,201	89	100 " <i>m</i>	15.00	1,372.09	1.14
Penetang .....	3,920	179	100 " <i>s</i>	10.00	1,850.00	0.47
Perth .....	3,710	{ 49 13 4 4	{ 100 c.p. <i>s</i> 250 " <i>s</i> 400 " <i>s</i> 600 " <i>s</i>	{ 22.00 34.00 46.00 64.00	1,818.62	0.49
Peterboro .....	21,439	{ 102 1,157 20	{ Magnetite arcs 60 watt <i>m</i> 300 " <i>m</i>	{ 50.50 9.00 27.00	16,197.95	0.76
Petrolia .....	2,911	{ 142 24	{ 100 " <i>s</i> 250 " <i>s</i>	{ 15.00 50.00	3,375.00	1.16
Picton .....	3,263	282	100 " <i>s</i>	12.50	4,361.71	1.34
Plattsville .....		32	100 " <i>m</i>	18.00	576.00	**
Point Edward....	1,150	56	150 c.p. <i>s</i>	15.00	878.75	0.76
Port Arthur .....	15,629	2,783	..... <i>m</i>	.....	17,628.93	1.13
Port Colborne....	3,123	221	100 watt <i>m</i>	14.00	3,045.17	0.97
Port Credit .....	1,119	102	100 " <i>m</i>	11.00	1,122.00	1.00
Port Dalhousie...	1,424	103	100 " <i>m</i>	15.00	1,442.00	0.92
Port Dover .....	1,380	{ 12 96	{ 300 " <i>m</i> 100 " <i>m</i>	{ 45.00 23.00	2,644.50	1.91
Port McNicoll...	576	40	100 " <i>m</i>	13.00	494.00	0.86
Port Perry .....	1,162	90	100 " <i>m</i>	25.00	2,189.00	1.88
Port Stanley .....	717	{ 140    25	{ 100 " <i>m</i> 100 " <i>m</i>	{ 13.00 8.70	2,036.70	
Prescott .....	2,723	{ 161 210	{ 100 " <i>m</i> 100 " <i>m</i>	{ 13.00 12.00	4,508.00	1.65
Preston .....	5,547	{ 2 292 34 34	{ 400 " <i>s</i> 100 " <i>s</i> 500 " <i>s</i> 750 " <i>s</i>	{ 21.00 11.00 48.00 60.00	5,173.24	0.93
Priceville .....		15	100 " <i>m</i>	31.50	472.50	**
Princeton .....		21	100 " <i>m</i>	20.00	420.00	**
Queenston .....		30	100 " <i>m</i>	21.00	630.00	*

*s* Series system. *m* Multiple system. \*Operation for less than a year.

\*\*Population not shown in Government statistics. ||Summer service only.

## STATEMENT "E"—Continued

Street Lighting Installation in Hydro Municipalities, December 31, 1923, showing  
Cost per Year, Cost per Lamp, and Cost per Capita

Municipality	Population	Number of lamps	Size and style of lamps	Cost per lamp per annum	Total cost per annum	Cost per capita
				\$ c.	\$ c.	\$ c.
Ridgetown.....	2,267	{ 137 17	100 watt 400 " <i>s</i>	{ 14.00 30.00 }	2,411.18	1.06
Ripley.....		49	100 " <i>m</i>	27.00	1,300.50	**
Riverside.....	3,000	73	250 c.p. <i>s</i>	22.50	1,080.00	††
Rockwood.....		66	100 watt <i>m</i>	13.50	821.51	**
Rodney.....	756	81	100 " <i>m</i>	13.00	1,061.37	1.40
St. Catharines....	20,961	2,844	100 " <i>m</i>	7.50	21,110.18	1.01
St. George.....		35	100 " <i>m</i>	10.00	350.00	**
St. Jacobs.....		40	100 " <i>m</i>	12.00	480.00	**
St. Marys.....	4,039	{ 212 121	100 c.p. 250 " <i>s</i>	{ 10.00 16.00 }	4,040.00	1.00
St. Thomas.....	17,892	{ 28 114 1,051	250 " 600 " 100 " <i>s</i>	{ 14.25 37.50 9.50 }	14,595.04	0.82
Sarnia.....	14,905	{ 78 662	1,000 " 150 " <i>s</i>	{ 45.00 13.00 }	12,076.58	0.81
Scarboro' Twp....		{ 242 80	100 watt 100 " <i>m</i>	{ 16.00 18.00 }	3,600.77	**
Seaforth.....	1,950	{ 70 63 21	80 c.p. 60 " 60 " <i>s</i>	{ 12.00 10.00 12.00 }	1,722.00	0.88
Sebringville.....		15	100 watt <i>m</i>	12.00	.....	**
Shelburne.....	1,101	91	100 " <i>s</i>	12.00	1,114.75	1.01
Simcoe.....	3,951	{ 27 244 11	250 " 100 " 100 " <i>m</i>	{ 30.00 9.00 9.00 }	3,166.50	0.80
Smiths Falls.....	6,529	{ 200 50	100 " 200 " <i>m</i>	{ 15.00 20.00 }	4,020.84	0.62
Springfield.....	432	40	100 " <i>m</i>	20.00	800.00	1.85
Stamford Twp....		415	100 " <i>m</i>	10.00	3,986.66	**
Stayner.....	1,004	{ 17 58	200 c.p. 100 watt <i>m</i>	{ 15.00 11.00 }	893.00	0.89
Stratford.....	17,611	{ 783 11 45 167 308	100 " 500 " 500 " 500 " 100 " <i>s</i>	{ 11.00 50.00 40.00 45.00 9.00 }	17,297.17	0.98
Strathroy.....	2,627	{ 32	250 " <i>s</i>	15.00	3,205.66	1.22
Sunderland.....		27	100 " <i>m</i>	20.00	551.25	**

*s* Series system.  
*m* Multiple system.

\*\*Population not shown in Government statistics.  
††Part of cost paid in Debenture Charges.

## STATEMENT "E"—Continued

Street Lighting Installation in Hydro Municipalities, December 31, 1923, showing  
Cost per Year, Cost per Lamp, and Cost per Capita

Municipality	Population	Number of lamps	Size and style of lamps	Cost per lamp per annum	Total cost per annum	Cost per capita
Tara.....	521	68	100 watt <i>m</i>	\$ c. 25.00	\$ c. 1,833.30	\$ c. 3.52
Tavistock.....	1,003	{ 66 35	100 " <i>m</i> 200 " <i>m</i>	12.00 } 16.00 }	1,338.62	1.33
Tecumseh.....	1,019	20	100 " <i>m</i>	12.00	236.00	††
Teeswater.....	838	{ 15 35	200 " <i>s</i> 100 " <i>s</i>	45.00 } 28.00 }	1,655.00	1.97
Thamesford.....		34	100 " <i>m</i>	15.00	510.00	**
Thamesville.....	817	77	100 " <i>m</i>	12.00	924.00	1.13
Thedford.....	583	65	100 " <i>m</i>	30.00	1,950.00	3.34
Thorndale.....		26	100 " <i>m</i>	16.00	468.24	**
Thornton.....		21	100 " <i>m</i>	40.00	840.00	**
Thorold.....	5,243	{ 54 240 32 23	100 " <i>m</i> 60 " <i>m</i> 200 " <i>m</i> 4 Lt. cltr <i>m</i>	10.00 } 7.00 } 15.00 } 16.00 }	3,131.00	0.60
Tilbury.....	1,851	{ 88 1	100 watt <i>m</i> 200 " <i>m</i>	13.00 } 26.00 }	1,013.32	0.54
Tillsonburg.....	3,027	{ 48 139 100	250 c.p. <i>s</i> 80 " <i>s</i> 100 " <i>s</i>	16.00 } 10.00 } 10.00 }	2,925.35	0.96
Toronto.....	522,942	{ 6 6 43,279 127 92 76 1,318 37 5 442 5 24 353	50 watt <i>m</i> 60 " <i>m</i> 100 " <i>m</i> 150 " <i>m</i> 200 " <i>m</i> 250 " <i>m</i> 300 " <i>m</i> 500 " <i>m</i> 1,000 " <i>m</i> Lt stds, 100 w ea 1 Lt stds, 500 w 1 Lt stds, 300 w	6.56 } 4.80 } 8.00-12.00 } 12.00-15.00 } 18.00-24.00 } 20.00-24.00 } 28.00 } 45.00 } 90.00 } 47.50 } 52.50 } 58.00 }	400,889.62	0.76
Tottenham.....	512	49	100 watt <i>s</i>	25.00	1,225.00	2.39
Uxbridge.....	1,492	126	100 " <i>m</i>	23.00	2,856.59	1.91
Vaughan Twp.....		14	100 " <i>m</i>	17.00	238.00	**
Victoria Harbour.	1,485	64	100 " <i>m</i>	11.00	693.00	0.47
Walkerville.....	7,303	{ 48 639 164	600 c.p. <i>s</i> 60 watt <i>m</i> 100 " <i>m</i>	47.00 } 6.60 } 8.00 }	6,519.67	††
Wallaceburg.....	3,921	{ 180 29	100 " <i>s</i> 400 " <i>s</i>	12.00 } 25.00 }	2,745.35	0.70

*s* Series system.  
*m* Multiple system.

\*\*Population not shown in Government statistics.

††Part of cost paid direct in the form of debenture charges.



## STATEMENT "E"—Concluded

Street Lighting Installation in Hydro Municipalities, December 31, 1923, showing  
Cost per Year, Cost per Lamp, and Cost per Capita

Municipality	Population	Number of lamps	Size and style of lamps		Cost per lamp per annum	Total cost per annum	Cost per capita
					\$ c.	\$ c.	\$ c.
Wardsville.....	212	{ 25 6	75 watt 100 "	<i>m</i> <i>m</i>	{ 29.00 29.00 }	870.00	4.10
Waterdown.....	815	90	100 "	<i>m</i>	10.00	711.67	0.87
Waterford.....	1,112	120	100 "	<i>m</i>	10.00	1,219.57	1.10
Waterloo.....	5,976	{ 171 255 38 14 44 10	100 " 80 " 100 " 200 " 5 Lt. stds 3 Lt. stds	<i>s</i> <i>s</i> <i>m</i> <i>m</i> <i>m</i> <i>m</i>	{ 10.00 10.00 10.00 15.00 40.00 25.00 }	6,791.64	1.13
Watford.....	1,039	90	100 watt	<i>m</i>	15.00	1,365.00	1.31
Waubashene.....		30	100 "	<i>m</i>	10.00	380.00	**
Welland.....	8,880	{ 124 519	200 " 100 "	<i>m</i> <i>m</i>	{ 16.00 9.00 }	7,973.76	0.89
Wellesley.....		59	100 "	<i>m</i>	15.00	871.25	**
Wellington.....	840	63	100 "	<i>m</i>	14.00	882.00	1.05
West Lorne.....	803	{ 78 8	100 " 200 "	<i>m</i> <i>m</i>	{ 11.00 14.00 }	1,046.50	1.30
Weston.....	3,299	{ 64 369 32 5 5 20	600 c.p. 100 " 150 " 100 " 5 Lt. stds 300 watt	<i>s</i> <i>s</i> <i>s</i> <i>s</i> <i>m</i> <i>m</i>	{ 55.00 9.00 10.00 8.00 24.00 20.00 }	8,012.75	2.43
Whitby.....	4,131	{ 207 118	80 c.p. 100 watt	<i>s</i> <i>m</i>	{ 7.50 7.50 }	2,596.87	0.63
Williamsburg.....		18	100 "	<i>m</i>	20.00	360.00	**
Winchester.....	1,058	117	100 "	<i>m</i>	13.00	1,521.00	1.44
Windsor.....	38,530	{ 2,642 167 419	100 " 400 " 600 "	<i>s</i> <i>s</i> <i>s</i>	{ 13.00 28.00 50.00 }	58,396.21	††
Wingham.....	2,470	{ 88 25 20	100 c.p. 250 " 200 watt	<i>s</i> <i>s</i> <i>m</i>	{ 28.00 40.00 40.00 }	4,503.13	1.82
Woodbridge.....	679	77	100 "	<i>m</i>	11.00	847.00	1.25
Woodstock.....	10,164	{ 50 450 172 105	250 " 80 " 60 " 100 "	<i>s</i> <i>s</i> <i>m</i> <i>m</i>	{ 20.00 8.00 8.00 8.00 }	6,779.50	0.66
Woodville.....	455	36	100 "	<i>m</i>	20.00	720.00	1.58
Wyoming.....	489	50	100 "	<i>m</i>	20.00	1,000.00	2.05
Zurich.....		60	100 "	<i>m</i>	13.00	790.00	**

*s* Series system. *m* Multiple system. \*\*Population not shown in Government statistics.

††Includes Sandwich. Part of cost paid direct in the form of Debenture Charges.

## STATEMENT

## Cost of Power to Hydro Municipalities

Municipality	Interim rates at which power is billed to the municipality and adjusted to cost at the end of the year											
	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Acton.....d		36.00	36.00	36.00	36.00	36.00	36.00	35.00	32.00	32.00	37.00	37.00
Agincourt.....d												51.00
Ailsa Craig.....d					49.67	49.67	49.67	49.00	49.00	49.00	49.00	49.00
Alexandria.....d									65.00	80.00	80.00	80.00
Alliston.....d							40.00	40.00	50.00	60.00	65.00	55.00
Alvinston.....d											95.95	95.95
Ancaster.....d								25.81	25.81	25.81	25.81	25.81
Apple Hill.....d									60.00	85.00	85.00	85.00
Arthur.....d						45.00	45.00	45.00	65.00	85.00	85.00	85.00
Aylmer.....d							39.00	38.00	38.00	45.00	50.00	50.00
Ayr.....d				37.40	37.40	37.40	37.40	45.00	50.00	50.00	50.00	50.00
Baden.....d	36.95	37.00	32.00	32.00	32.00	32.00	32.00	32.00	32.00	32.00	36.00	36.00
Barrie.....d		33.70	33.70	33.70	33.70	31.00	31.00	29.00	29.00	29.00	29.00	29.00
Barton Twp.....d			Served by		Hamilton							
Beachville.....d	33.89	31.00	31.00	31.00	31.00	28.00	28.00	27.00	27.00	30.00	37.00	37.00
Beaverton.....d				6.17	59.00	41.21	41.21	45.00	55.00	60.00	52.00	50.00
Beeton.....d							45.00	45.00	85.00	85.00	85.00	75.00
Belle River.....d												92.00
Blenheim.....d					43.70	43.70	43.70	50.00	50.00	53.00	54.00	50.00
Bloomfield.....d								66.16	66.16	66.16	72.50	72.50
Bolton.....d				43.00	43.00	43.00	43.00	43.00	60.00	60.00	60.00	60.00
Bothwell.....d					59.26	59.26	59.26	60.00	60.00	60.00	55.00	55.00
Bradford.....d							47.00	47.00	75.00	75.00	75.00	75.00
Brampton.....b	29.00	25.00	25.00	25.00	24.00	22.00	22.00	22.00	20.00	20.00	26.00	28.00
Brantford.....a			19.50	19.50	19.00	19.00	19.00	18.00	18.00	20.00	25.00	25.00
Brantford Twp....d												
Brechin.....d												
Bridgeport, ext....d			Served by		Kitchener		50.00	55.00	85.00	90.00	90.00	85.00
Brigden.....d						57.56	57.50	57.50	57.50	60.00	66.00	70.00
Brockville.....d							30.00	40.00	45.19	55.00	55.00	40.00
Broughdale (London	Township		V.A.)									
Bullock's Corners & Greensville, ext....												
Burford.....d			Served by		Dundas							
Burgessville.....d				37.50	37.50	37.50	37.50	60.00	70.00	70.00	70.00	60.00
Caledonia.....d	29.10	29.10	24.00	24.00	24.00	24.00	24.00	24.00	24.00	24.00	29.00	29.00
Cannington.....d				65.77	63.00	45.79	45.79	50.00	65.00	65.00	65.00	55.00
Carleton Place....d								33.00	33.00	44.00	44.00	44.00
Chatham.....a				30.78	30.78	30.78	30.78	29.00	29.00	28.00	31.00	31.00
Chatsworth.....d					30.18	30.18	30.18	30.00	45.00	60.00	70.00	60.00
Chesley.....d					40.00	40.00	40.00	40.00	45.00	55.00	55.00	50.00
Chesterville.....d			36.12	43.29	46.00	46.00	46.00	46.00	76.73	85.00	85.00	65.00
Chippawa.....d								35.00	35.00	32.00	32.00	25.00
Clinton.....a			39.00	39.00	42.00	42.00	42.00	43.00	43.00	46.00	48.00	50.00
Coldwater.....d	28.00	28.00	28.00	28.00	28.00	28.00	28.00	40.00	50.00	60.00	60.00	40.00
Collingwood.....d	33.79	33.79	33.79	33.97	30.00	30.00	30.00	28.00	28.00	36.00	45.00	40.00

Note a—Power delivered at 46,000, 26,400 or 22,000 volts.

Note b—Power delivered at 13,200 or 12,000 volts.

"F"

## and Power Rates to Consumers

## Power rates to consumers

1922					1923				
Service charge per horsepower per month	1st 50 hr. per month per kw-hr.	2nd 50 hr. per month per kw-hr.	All additional per kw-hr.	Prompt payment discount	Service charge per horsepower per month	1st 50 hr. per month per kw-hr.	2nd 50 hr. per month per kw-hr.	All additional per kw-hr.	Prompt payment discount
\$ c.	cents	cents	cents	%	\$ c.	cents	cents	cents	%
1.00	3.1	2.0	0.15	10	1.00	3.1	2.0	0.15	10
1.00	4.9	3.3	0.15	10	1.00	4.9	3.3	0.15	10
1.00	6.4	4.3	0.15	10	1.00	4.5	3.0	0.15	10
1.00	4.9	3.3	0.15	10	1.00	6.4	4.3	0.15	10
1.00	8.3	5.5	0.15	10	1.00	4.9	3.3	0.15	10
1.00	3.0	2.0	0.15	10	1.00	8.3	5.5	0.15	10
1.00	6.5	4.4	0.15	10	1.00	3.0	2.0	0.15	10
1.00	6.8	4.6	0.15	10	1.00	6.5	4.4	0.15	10
1.00	4.9	3.3	0.15	10	1.00	6.8	4.6	0.15	10
1.00	4.9	3.3	0.15	10	1.00	4.9	3.3	0.15	10
1.00	4.9	3.3	0.15	10	1.00	4.9	3.3	0.15	10
1.00	3.1	2.0	0.15	10	1.00	3.5	2.3	0.15	10
1.00	2.2	1.5	0.15	10	1.00	2.0	1.4	0.15	10
1.00	1.67	1.11	0.15	10	1.00	2.5	1.7	0.15	10
1.00	2.2	1.5	0.15	10	1.00	2.2	1.5	0.15	10
1.00	4.9	3.3	0.15	10	1.00	4.2	2.8	0.15	10
1.00	6.8	4.6	0.15	10	1.00	4.9	3.3	0.15	10
1.00	4.9	3.3	0.15	10	1.00	8.6	5.7	0.15	10
1.00	6.5	4.3	0.15	10	1.00	4.9	3.3	0.15	10
1.00	5.4	3.6	0.15	10	1.00	6.5	4.3	0.15	10
1.00	6.4	4.3	0.15	10	1.00	5.4	3.6	0.15	10
1.00	4.9	3.3	0.15	10	1.00	6.4	4.3	0.15	10
1.00	2.0	1.33	0.167	10 & 10	1.00	4.9	3.3	0.15	10
1.00	2.11	1.39	0.167	10 & 10	1.00	2.33	1.56	0.167	10 & 10
1.00	2.8	1.8	0.15	10	1.00	2.00	1.4	0.15	10
1.00	6.8	4.6	0.15	10	1.00	5.4	3.6	0.15	10
1.00	2.8	1.8	0.15	10	1.00	6.4	4.3	0.15	10
1.00	6.8	4.6	0.15	10	1.00	4.9	3.3	0.15	10
1.00	5.2	3.5	0.15	10	1.00	2.0	1.4	0.15	10
1.00	2.8	1.8	0.15	10	1.00	2.8	1.8	0.15	10
1.00	6.8	4.6	0.15	10	1.00	6.8	4.6	0.15	10
1.00	4.9	3.3	0.15	10	1.00	2.8	1.8	0.15	10
1.00	2.33	1.56	0.167	10 & 10	1.00	6.8	4.6	0.15	10
1.00	5.9	4.0	0.15	10	1.00	5.2	3.1	0.15	10
1.00	3.6	2.4	0.15	10	1.00	4.7	3.1	0.15	10
1.00	2.5	1.7	0.15	10	1.00	2.8	1.8	0.15	10
1.00	4.9	3.3	0.15	10	1.00	6.8	4.6	0.15	10
1.00	5.1	3.4	0.15	10	1.00	5.2	3.5	0.15	10
1.00	5.2	3.5	0.15	10	1.00	2.6	1.8	0.15	10
1.00	2.8	1.8	0.15	10	1.00	5.9	4.0	0.15	10
1.00	4.9	3.3	0.15	10	1.00	3.6	2.4	0.15	10
1.00	4.9	3.3	0.15	10	1.00	2.5	1.7	0.15	10
1.00	3.2	2.1	0.15	10	1.00	4.9	3.3	0.15	10
					1.00	5.1	3.4	0.15	10
					1.00	5.2	3.5	0.15	10
					1.00	2.8	1.8	0.15	10
					1.00	4.9	3.3	0.15	10
					1.00	4.9	3.3	0.15	10
					1.00	3.2	2.1	0.15	10

Note c—Power delivered at 6,600 volts.

Note d—Power delivered at 4,000 or 2,000 volts.



## STATEMENT

## Cost of Power to Hydro Municipalities

Municipality	Interim rates at which power is billed to the municipality and adjusted to cost at the end of the year											
	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Comber..... <i>d</i>					56.22	56.22	56.22	60.00	60.00	60.00	60.00	50.00
Cookstown..... <i>d</i>							35.00	35.00	60.00	60.00	60.00	60.00
Creemore..... <i>d</i>			54.13	54.13	54.13	54.13	54.13	60.00	65.00	65.00	70.00	60.00
Dashwood..... <i>d</i>							56.75	56.00	56.00	56.00	62.00	62.00
Delaware..... <i>d</i>				46.56	46.56	46.56	46.56	50.00	85.00	85.00	85.00	75.00
Dorchester..... <i>d</i>				45.00	45.00	45.00	45.00	50.00	50.00	50.00	50.00	50.00
Drayton..... <i>d</i>							60.45	60.00	65.00	70.00	72.00	70.00
Dresden..... <i>d</i>				43.00	43.00	43.00	43.00	42.00	38.00	38.00	38.00	38.00
Drumbo..... <i>d</i>				40.73	40.73	40.73	40.73	45.00	60.00	55.00	55.00	50.00
Dublin..... <i>d</i>						47.91	47.91	48.00	60.00	60.00	70.00	70.00
Dundalk..... <i>d</i>					27.30	27.30	27.30	27.00	38.00	50.00	55.00	45.00
Dundas..... <i>b</i>	17.00	16.00	15.00	15.00	14.00	14.00	14.00	14.00	14.00	17.00	22.00	23.00
Dunnville..... <i>a</i>							27.77	27.77	35.00	40.00	50.00	42.00
Durham..... <i>d</i>				33.97	33.97	33.97	33.97	33.00	45.00	50.00	50.00	40.00
Dutton..... <i>d</i>				43.53	43.53	43.53	43.53	43.00	40.00	40.00	44.00	44.00
Elmira..... <i>d</i>		38.00	38.00	38.00	38.00	38.00	38.00	38.00	38.00	38.00	38.00	38.00
Elmvale..... <i>d</i>		31.00	31.00	31.00	31.00	31.00	31.00	31.00	37.00	37.00	37.00	35.00
Elmwood..... <i>d</i>							35.00	35.00	45.00	55.00	55.00	55.00
Elora..... <i>d</i>			33.97	33.97	33.97	33.97	33.97	40.00	40.00	40.00	44.00	40.00
Embro..... <i>d</i>				39.85	45.00	45.00	45.00	60.00	75.00	75.00	80.00	70.00
Etobicoke Twp..... <i>d</i>						27.00	27.00	27.00	27.00	27.00	27.00	30.00
Exeter..... <i>d</i>					41.66	41.66	41.66	41.00	41.00	41.00	46.00	55.00
Fergus..... <i>d</i>			33.97	33.97	33.97	33.97	33.97	40.00	40.00	44.00	47.00	40.00
Flesherton..... <i>d</i>					25.96	25.96	25.96	26.00	36.00	45.00	55.00	55.00
Ford City..... <i>d</i>											46.42	40.00
Forest..... <i>d</i>						63.27	53.27	63.00	60.00	60.00	60.00	55.00
Galt..... <i>c</i>	25.00	22.00	21.50	21.50	21.00	20.00	20.00	20.00	20.00	21.00	25.00	28.00
Gamebridge..... <i>d</i>			Served by		Breachin							
Georgetown..... <i>d</i>		36.00	36.00	36.00	36.00	36.00	36.00	36.00	35.00	35.00	38.00	38.00
Glencoe..... <i>d</i>									78.35	78.35	76.00	70.00
Glen Williams, ext.. <i>a</i>			Served by		Georgetown							
Goderich..... <i>d</i>			37.00	37.00	43.00	43.00	43.00	43.00	43.00	50.00	55.00	57.00
Grand Valley..... <i>d</i>						45.00	45.00	45.00	60.00	70.00	60.00	60.00
Granton..... <i>d</i>					48.61	48.61	48.61	48.00	55.00	55.00	55.00	55.00
Gravenhurst..... <i>c</i>									15.00	15.00	20.00	20.00
Guelph..... <i>b</i>	25.00	22.00	21.00	21.00	20.00	20.00	20.00	19.00	19.00	20.00	25.00	27.00
Hagersville..... <i>d</i>		33.21	33.21	33.21	33.21	33.21	33.21	34.00	36.00	36.00	36.00	32.00
Hamilton..... <i>b</i>	17.00	16.00	15.00	15.00	14.00	14.00	14.00	14.00	14.00	16.00	20.00	24.00
Hanover..... <i>d</i>							35.00	35.00	35.00	40.00	35.00	35.00
Harriston..... <i>d</i>					46.62	46.62	46.62	48.00	52.00	55.00	50.00	50.00
Havelock..... <i>d</i>											65.00	65.00
Hensall..... <i>d</i>						47.76	47.67	47.00	55.00	57.00	64.00	75.00
Hespeler..... <i>c</i>	26.00	23.00	23.00	23.00	22.50	21.00	21.00	21.00	21.00	23.00	29.00	30.00
Highgate..... <i>d</i>						51.82	51.82	51.00	51.00	55.00	55.00	55.00
Holstein..... <i>d</i>					43.50	43.50	43.50	44.00	75.00	90.00	90.00	90.00

Note *a*—Power delivered at 46,000, 26,400 or 22,000 volts.Note *b*—Power delivered at 13,200 or 12,000 volts.

## “F”—Continued

## and Power Rates to Consumers

Power rates to consumers									
1922					1923				
Service charge per horsepower per month	1st 50 hr. per month per kw-hr.	2nd 50 hr. per month per kw-hr.	All additional per kw-hr.	Prompt payment discount	Service charge per horsepower per month	1st 50 hr. per month per kw-hr.	2nd 50 hr. per month per kw-hr.	All additional per kw-hr.	Prompt payment discount
\$ c.	cents	cents	cents	%	\$ c.	cents	cents	cents	%
1.00	6.5	4.4	0.15	10	1.00	5.6	3.8	0.15	10
1.00	6.8	4.6	0.15	10	1.00	4.9	3.3	0.15	10
1.00	6.4	4.3	0.15	10	1.00	6.4	4.3	0.15	10
1.00	6.7	4.5	0.15	10	1.00	6.7	4.5	0.15	10
1.00	5.4	3.6	0.15	10	1.00	5.4	3.6	0.15	10
1.00	5.4	3.6	0.15	10	1.00	4.9	3.3	0.15	10
1.00	7.1	4.7	0.15	10	1.00	7.1	4.7	0.15	10
1.00	3.6	2.4	0.15	10	1.00	3.6	2.4	0.15	10
1.00	4.8	3.2	0.15	10	1.00	4.8	3.2	0.15	10
1.00	6.4	4.3	0.15	10	1.00	6.4	4.3	0.15	10
1.00	4.2	2.8	0.15	10	1.00	3.9	2.6	0.15	10
1.00	2.0	1.33	0.167	10 & 10	1.00	2.0	1.33	0.167	10 & 10
1.00	4.2	2.8	0.15	10	1.00	3.9	2.6	0.15	10
1.00	4.5	3.0	0.15	10	1.00	3.9	2.6	0.15	10
1.00	3.5	2.3	0.15	10	1.00	3.5	2.3	0.15	10
1.00	3.6	2.4	0.15	10	1.00	3.6	2.4	0.15	10
1.00	3.6	2.4	0.15	10	1.00	3.5	2.3	0.15	10
1.00	5.4	3.6	0.15	10	1.00	5.4	3.6	0.15	10
1.00	3.9	2.6	0.15	10	1.00	3.6	2.4	0.15	10
1.00	7.1	4.7	0.15	10	1.00	7.1	4.7	0.15	10
1.00	2.8	1.8	0.15	10	1.00	2.8	1.8	0.15	10
1.00	3.9	2.6	0.15	10	1.00	4.2	2.8	0.15	10
1.00	3.9	2.6	0.15	10	1.00	3.6	2.4	0.15	10
1.00	4.2	2.8	0.15	10	1.00	4.2	2.8	0.15	10
1.00	3.1	2.0	0.15	10	1.00	3.1	2.0	0.15	10
1.00	6.8	4.6	0.15	10	1.00	6.4	4.3	0.15	10
1.00	2.0	1.4	0.15	10	1.00	2.6	1.8	0.15	10
1.00	8.7	5.8	0.15	10	1.00	8.7	5.8	0.15	10
1.00	2.5	1.7	0.15	10	1.00	2.5	1.7	0.15	10
1.00	7.8	5.2	0.15	10	1.00	7.1	4.7	0.15	10
1.00	4.1	2.7	0.15	10	1.00	4.1	2.7	0.15	10
1.00	4.5	3.0	0.15	10	1.00	4.8	3.2	0.15	10
1.00	6.8	4.6	0.15	10	1.00	6.8	4.6	0.15	10
1.00	5.6	3.8	0.15	10	1.00	5.2	3.5	0.15	10
1.00	3.5	2.25	0.15	10	1.00	3.2	2.1	0.15	10
1.00	1.67	1.11	0.133	10 & 10	1.00	1.67	1.11	0.133	10 & 10
1.00	2.5	1.7	0.15	10	1.00	2.0	1.4	0.15	10
1.00	1.67	1.11	0.133	10 & 10	1.00	2.0	1.33	0.167	10 & 10
1.00	3.3	2.2	0.15	10	1.00	3.1	2.0	0.15	10
1.00	4.8	3.2	0.15	10	1.00	4.8	3.2	0.15	10
1.00	5.6	3.8	0.15	10	1.00	3.6	2.4	0.15	10
1.00	2.5	1.7	0.15	10	1.00	6.4	4.3	0.15	10
1.00	5.8	3.9	0.15	10	1.00	2.8	1.8	0.15	10
1.00	9.3	6.2	0.15	10	1.00	5.6	3.8	0.15	10
1.00	9.3	6.2	0.15	10	1.00	9.3	6.2	0.15	10

Note c—Power delivered at 6,600 volts.

Note d—Power delivered at 4,000 or 2,200 volts.

# STATEMENT

## Cost of Power to Hydro Municipalities

Municipality	Interim rates at which power is billed to the municipality and adjusted to cost at the end of the year											
	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Hornings Mills.....												
Huntsville..... <i>d</i>						22.51	22.51	25.00	25.00	25.00	25.00	25.00
Ingersoll..... <i>b</i>	28.00	25.50	25.50	25.50	25.00	23.00	23.00	23.00	21.00	23.00	29.00	30.00
Kemptville.....										85.00	80.00	60.00
Kincardine.....											48.00	70.00
Kingston..... <i>a</i>							28.00		25.00	25.00	27.00	26.00
Kirkfield.....									45.00	60.00	60.00	55.00
Kitchener..... <i>b</i>	25.00	22.50	21.50	21.50	21.00	20.00	20.00	19.00	19.00	20.00	25.00	27.00
Lakefield.....									36.00	36.00	45.00	45.00
Lambeth..... <i>d</i>				46.56	46.56	46.56	46.56	50.00	85.00	75.00	75.00	70.00
Lanark.....									92.50	92.50	92.50	75.00
Lancaster.....									97.00	97.00	97.00	97.00
Listowel..... <i>d</i>					37.41	37.41	37.41	37.00	37.00	37.00	37.00	40.00
London..... <i>b</i>	28.00	24.00	23.00	23.00	22.00	21.00	21.00	19.00	19.00	20.00	25.00	25.00
Lucan..... <i>d</i>				47.74	47.74	47.74	47.74	40.00	40.00	35.00	38.00	40.00
Lucknow.....											60.00	65.00
Lynden..... <i>d</i>				33.00	33.00	33.00	33.00	40.00	50.00	50.00	50.00	45.00
Markdale..... <i>d</i>					23.24	23.24	23.24	23.00	35.00	50.00	50.00	40.00
Markham..... <i>d</i>									77.74	77.74	70.00	65.00
Marmora.....											35.00	35.00
Martintown.....									54.00	85.00	85.00	75.00
Maxville.....									86.00	86.00	86.00	86.00
Merlin.....												60.00
Merritton.....											18.00	20.00
Midland..... <i>d</i>	21.00	20.30	19.45	19.37	19.37	19.00	19.00	20.00	28.00	32.00	32.00	30.00
Milton..... <i>b</i>		28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	28.00	32.00	32.00
Milverton..... <i>d</i>					35.63	35.63	35.63	35.00	35.00	35.00	35.00	35.00
Mimico..... <i>d</i>	30.74	30.00	28.00	28.00	28.00	27.00	27.00	25.00	21.00	21.00	26.00	30.00
Mitchell..... <i>a</i>	38.00	37.00	37.00	37.00	37.00	36.00	36.00	36.00	36.00	36.00	37.00	37.00
Moorefield..... <i>d</i>							63.93	63.00	70.00	70.00	70.00	75.00
Mount Brydges..... <i>d</i>				46.56	46.56	46.56	46.56	50.00	70.00	70.00	76.00	70.00
Mount Forest..... <i>d</i>					34.51	34.51	34.51	40.00	55.00	65.00	65.00	60.00
Neustadt..... <i>d</i>								42.50	45.00	55.00	55.00	45.00
Newbury..... <i>d</i>										67.10	67.10	67.10
New Hamburg..... <i>d</i>	32.00	32.00	32.00	32.00	32.00	32.00	32.00	32.00	32.00	32.00	38.00	38.00
New Toronto..... <i>d</i>			28.00	28.00	28.00	27.00	27.00	25.00	20.00	22.00	26.00	30.00
Niagara Falls.. <i>b &amp; d</i>					11.50	11.50	11.50	11.50	11.50	12.50	17.50	18.00
Niagara-on-the-Lake..... <i>b</i>									28.00	28.00	26.00	26.00
Norwich..... <i>d</i>	30.00	32.00	32.00	32.00	38.00	38.00	38.00	35.00	35.00	35.00	39.00	40.00
Norwood.....											38.00	38.00
Oil Springs..... <i>d</i>							38.54	38.00	43.00	43.00	48.00	40.00
Omeme..... <i>d</i>							39.39	39.39	39.39	39.39	39.39	35.00
Orangeville.....					35.00	35.00	35.00	35.00	55.00	65.00	65.00	60.00
Ottawa..... <i>a</i>	15.00	15.00	15.00	14.00	14.00	14.00	14.00	14.00	14.00	13.50	13.00	12.00
Otterville..... <i>d</i>					45.00	45.00	45.00	50.00	50.00	50.00	52.00	52.00
Owen Sound..... <i>d</i>					31.00	31.00	31.00	28.00	28.00	30.00	40.00	35.00
Paisley.....												115.00
Palmerston..... <i>d</i>					40.82	40.82	40.82	45.00	50.00	45.00	45.00	45.00
Paris..... <i>a</i>			21.00	21.00	21.00	21.00	21.00	20.00	19.00	21.00	26.00	28.00
Parkhill..... <i>d</i>									75.23	75.00	75.00	70.00

Note *a*—Power delivered at 46,000, 26,400 or 22,000 volts.Note *b*—Power delivered at 13,200 or 12,000 volts.



## "F"—Continued

## and Power Rates to Consumers

## Power rates to consumers

1922					1923				
Service charge per horsepower per month	1st 50 hr. per month per kw-hr.	2nd 50 hr. per month per kw-hr.	All additional per kw-hr.	Prompt payment discount	Service charge per horsepower per month	1st 50 hr. per month per kw-hr.	2nd 50 hr. per month per kw-hr.	All additional per kw-hr.	Prompt payment discount
\$ c.	cents	cents	cents	%	\$ c.	cents	cents	cents	%
1.00	5.6	3.8	0.15	10	1.00	5.6	3.8	0.15	10
1.00	3.5	2.25	0.15	10	1.00	3.5	2.25	0.15	10
1.00	2.0	1.4	0.15	10	1.00	2.2	1.5	0.15	10
1.00	8.6	5.7	0.15	10	1.00	7.8	5.2	0.15	10
1.00	5.4	3.6	0.15	10	1.00	5.4	3.6	0.15	10
1.00	2.0	1.4	0.15	10	1.00	1.83	1.233	0.156	10 & 10
1.00	5.4	3.6	0.15	10	1.00	5.4	3.6	0.15	10
1.00	2.0	1.33	0.167	10 & 10	1.00	2.0	1.4	0.15	10
1.00	4.2	2.8	0.15	10	1.00	4.2	2.8	0.15	10
1.00	5.4	3.6	0.15	10	1.00	5.4	3.6	0.15	10
1.00	8.6	5.7	0.15	10	1.00	7.8	5.2	0.15	10
1.00	8.6	5.7	0.15	10	1.00	8.6	5.7	0.15	10
1.00	3.8	2.5	0.15	10	1.00	3.8	2.5	0.15	10
1.00	2.0	1.33	0.167	10 & 10	1.00	2.33	1.56	0.167	10 & 10
1.00	3.9	2.6	0.15	10	1.00	3.9	2.6	0.15	10
1.00	7.1	4.7	0.15	10	1.00	7.1	4.7	0.15	10
1.00	4.5	3.0	0.15	10	1.00	4.2	2.8	0.15	10
1.00	3.5	2.3	0.15	10	1.00	3.5	2.3	0.15	10
1.00	7.8	5.2	0.15	10	1.00	7.8	5.2	0.15	10
1.00	4.2	2.8	0.15	10	1.00	4.2	2.8	0.15	10
1.00	6.4	4.3	0.15	10	1.00	6.4	4.3	0.15	10
1.00	8.0	5.3	0.15	10	1.00	8.0	5.3	0.15	10
1.00	1.67	1.11	0.133	10 & 10	1.00	7.4	4.9	0.15	10
1.00	2.00	1.4	0.15	10	1.00	1.67	1.11	0.133	10 & 10
1.00	2.2	1.5	0.15	10	1.00	2.00	1.4	0.15	10
1.00	3.3	2.2	0.15	10	1.00	2.5	1.7	0.15	10
1.00	2.2	1.5	0.15	10	1.00	3.3	2.2	0.15	10
1.00	3.6	2.4	0.15	10	1.00	2.8	1.8	0.15	10
1.00	7.1	4.7	0.15	10	1.00	3.6	2.4	0.15	10
1.00	6.1	4.1	0.15	10	1.00	7.1	4.7	0.15	10
1.00	4.2	2.8	0.15	10	1.00	6.1	4.1	0.15	10
1.00	4.9	3.3	0.15	10	1.00	4.2	2.8	0.15	10
1.00	8.1	5.4	0.15	10	1.00	4.9	3.3	0.15	10
1.00	3.6	2.4	0.15	10	1.00	8.1	5.4	0.15	10
1.00	2.0	1.33	0.167	10 & 10	1.00	3.6	2.4	0.15	10
1.00	1.867	1.267	0.16	25 & 10	1.00	2.2	1.5	0.15	10
1.00	2.2	1.5	0.15	10	1.00	1.83	1.233	0.156	10 & 10
1.00	3.2	2.1	0.15	10	1.00	2.5	1.7	0.15	10
1.00	3.9	2.6	0.15	10	1.00	3.5	2.3	0.15	10
1.00	4.8	3.2	0.15	10	1.00	3.9	2.6	0.15	10
1.00	4.5	3.0	0.15	10	1.00	4.2	2.8	0.15	10
1.00	3.6	2.4	0.15	10	1.00	4.5	3.0	0.15	10
1.00	1.8	1.2	0.15	15 & 10	1.00	3.6	2.4	0.15	10
1.00	4.7	3.1	0.15	10	1.00	1.8	1.2	0.15	15 & 10
1.00	2.0	1.4	0.15	10	1.00	4.7	3.1	0.15	10
1.00	4.7	3.1	0.15	10	1.00	2.0	1.4	0.15	10
1.00	2.0	1.33	0.167	10 & 10	1.00	9.3	6.2	0.15	10
1.00	7.4	4.9	0.15	10	1.00	4.7	3.1	0.15	10
					1.00	2.0	1.33	0.167	10 & 10
					1.00	7.1	4.7	0.15	10

Note c—Power delivered at 6,600 volts.

Note d—Power delivered at 4,000 or 2,200 volts.

# STATEMENT

## Cost of Power to Hydro Municipalities

Municipality	Interim rates at which power is billed to the municipality and adjusted to cost at the end of the year											
	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Penetang..... <i>d</i>	28.80	26.50	26.50	26.50	26.50	22.00	22.00	22.00	32.00	30.00	30.00	30.00
Perth..... <i>d</i>								32.00	32.00	45.00	45.00	45.00
Peterboro..... <i>c d</i>			18.00	18.00	17.70	17.70	17.50	17.50	17.50	17.50	22.50	22.50
Petrolia..... <i>d</i>					36.26	36.26	36.26	36.00	36.00	36.00	36.00	36.00
Plattsville..... <i>d</i>				49.27	49.27	49.27	49.27	60.00	65.00	65.00	75.00	90.60
Picton..... <i>d</i>								69.14	69.14	69.14	52.00	52.00
Point Edward.....												40.42
Port Arthur..... <i>a</i>	20.30	19.50	22.25	22.71	20.75	20.75	19.75	19.75			21.00	21.00
Port Colborne..... <i>a</i>									21.00	21.00	25.00	27.00
Port Credit..... <i>d</i>	36.79	31.00	28.00	28.00	27.00	27.00	27.00	25.00	23.00	23.00	28.00	35.00
Port Dalhousie..... <i>d</i>		22.30	21.42	22.49	24.31	25.81	24.85	21.56	17.00	17.00	22.00	24.00
Port Dover.....											62.00	60.00
Port McNicoll..... <i>d</i>				35.00	35.00	25.00	25.00	35.00	85.00	85.00	40.00	30.00
Port Perry..... <i>d</i>											90.00	90.00
Port Robinson, ext.			Serve	d by	Wella	nd						
Port Stanley..... <i>d</i>	59.75	55.50	43.85	50.90	49.53	46.78	45.54	53.03	53.00	50.00	50.00	48.00
Prescott..... <i>d</i>			39.59	28.67	25.00	25.00	25.00		44.93	55.00	52.00	45.00
Preston..... <i>c</i>	25.00	21.50	21.00	21.00	20.00	19.00	19.00	19.00	19.00	22.00	27.00	27.00
Priceville.....											47.00	65.00
Princeton..... <i>d</i>				65.95	65.95	65.95	65.95	70.00	85.00	90.00	90.00	75.00
Queenston.....											18.42	20.00
Ridgetown..... <i>d</i>					47.17	47.17	47.17	47.00	47.00	45.00	45.00	45.00
Ripley.....											60.00	70.00
Riverside..... <i>d</i>											52.75	45.00
Rockwood..... <i>d</i>		38.00	38.00	38.00	38.00	38.00	38.00	38.00	55.00	55.00	65.00	60.00
Rodney..... <i>d</i>						63.00	63.00	63.00	63.00	55.00	50.00	48.00
St. Catharines..... <i>b</i>			14.00	14.00	14.00	14.00	14.00	14.00	14.00	14.00	18.25	20.00
St. Clair Beach..... <i>d</i>											75.59	75.00
St. George..... <i>d</i>				38.78	38.78	38.78	38.78	45.00	45.00	45.00	49.00	40.00
St. Jacobs..... <i>d</i>						32.44	42.18	32.00	32.00	35.00	40.00	40.00
St. Marys..... <i>b</i>	38.00	29.50	29.50	29.50	28.00	28.00	28.00	28.00	28.00	32.00	35.00	35.00
St. Thomas..... <i>b</i>	32.00	29.00	28.00	28.00	27.00	26.00	26.00	24.00	24.00	25.00	30.00	30.00
Sandwich.....			Serve	d by	Wind	sor						
Sarnia..... <i>a</i>					38.00	38.00	38.00	38.00	36.00	35.00	35.00	35.00
Scarboro Tp..... <i>d</i>								25.00	25.00	28.00	35.00	35.00
Seaforth..... <i>a</i>	41.00	40.00	40.00	40.00	40.00	38.00	38.00	38.00	36.00	36.00	40.00	40.00
Sebringville, ext.....			Serve	d by	Strat	ord						
Shelburne..... <i>d</i>					30.00	30.00	30.00	30.00	38.00	50.00	50.00	50.00
Simcoe..... <i>a</i>				35.00	35.00	35.00	35.00	32.00	28.00	28.00	34.00	34.00
Smiths Falls..... <i>d</i>							28.00	28.00	28.00	40.00	40.00	40.00
Springfield..... <i>d</i>						65.00	65.00	65.00	65.00	65.00	65.00	65.00
Stamford Tp..... <i>b</i>							16.57	15.00	15.00	16.00	20.00	20.00
Stayner.....			37.82	37.82	37.82	35.00	35.00	35.00	40.00	40.00	45.00	40.00
Stouffville.....												70.00
Stratford..... <i>a</i>	32.00	30.00	30.00	30.00	29.00	27.00	27.00	25.00	25.00	27.00	30.00	30.00
Strathroy..... <i>b</i>				44.07	44.07	44.07	44.01	42.00	40.00	37.00	40.00	40.00
Sunderland..... <i>d</i>				82.68	81.00	50.00	50.00	55.00	85.00	85.00	85.00	75.00
Sutton.....												70.00
Tara..... <i>d</i>							37.00	37.00	85.00	90.00	90.00	90.00
Tavistock..... <i>d</i>						78.28	37.01	36.00	35.00	35.00	37.00	37.00

Note *a*—Power delivered at 46,000, 26,400 or 22,000 volts.Note *b*—Power delivered at 13,200 or 12,000 volts.

## "F"—Continued

## and Power Rates to Consumers

Power rates to consumers									
1922					1923				
Service charge per horsepower per month	1st 50 hr. per month per kw-hr.	2nd 50 hr. per month per kw-hr.	All additional per kw-hr.	Prompt payment discount	Service charge per horsepower per month	1st 50 hr. per month per kw-hr.	2nd 50 hr. per month per kw-hr.	All additional per kw-hr.	Prompt payment discount
\$ c.	cents	cents	cents	%	\$ c.	cents	cents	cents	%
1.00	2.0	1.4	0.15	10	1.00	2.0	1.4	0.15	10
1.00	3.6	2.4	0.15	10	1.00	3.5	2.3	0.15	10
1.00	1.3	0.8	0.1	10 & 10	1.00	1.3	0.8	0.1	10 & 10
1.00	3.1	2.0	0.15	10	1.00	3.1	2.0	0.15	10
1.00	5.4	3.6	0.15	10	1.00	5.4	3.6	0.15	10
1.00	5.6	3.8	0.15	10	1.00	5.6	3.8	0.15	10
1.00	1.75	1.0	0.1	10	1.00	3.1	2.0	0.15	10
1.00	2.5	1.7	0.15	10	1.00	1.75	1.0	0.1	10
1.00	2.3	1.6	0.15	10	1.00	2.8	1.8	0.15	10
1.00	2.33	1.56	0.167	10 & 10	1.00	2.8	1.8	0.15	10
1.00	7.4	4.9	0.15	10	1.00	2.2	1.5	0.15	10
1.00	4.9	3.3	0.15	10	1.00	7.4	4.9	0.15	10
1.00	7.5	5.0	0.15	10	1.00	3.5	2.3	0.15	10
1.00	2.11	1.39	0.167	10 & 10	1.00	7.5	5.0	0.15	10
1.00	5.0	3.0	0.15	10	1.00	2.11	1.39	0.167	10 & 10
1.00	4.2	2.8	0.15	10	1.00	5.4	3.6	0.15	10
1.00	2.0	1.4	0.15	10	1.00	3.6	2.4	0.15	10
1.00	5.6	3.8	0.15	10	1.00	2.6	1.8	0.15	10
1.00	7.8	5.2	0.15	10	1.00	5.6	3.8	0.15	10
1.00	2.0	1.4	0.15	10	1.00	7.8	5.2	0.15	10
1.00	4.2	2.8	0.15	10	1.00	2.0	1.4	0.15	10
1.00	7.1	4.7	0.15	10	1.00	3.6	2.4	0.15	10
1.00	4.9	3.3	0.15	10	1.00	7.1	4.7	0.15	10
1.00	4.9	3.3	0.15	10	1.00	4.9	3.3	0.15	10
1.00	5.6	3.8	0.15	10	1.00	4.9	3.3	0.15	10
1.00	1.867	1.267	0.16	25 & 10	1.00	5.6	3.8	0.15	10
1.00	7.1	4.7	0.15	10	1.00	1.867	1.267	0.16	25 & 10
1.00	3.8	2.5	0.15	10	1.00	7.1	4.7	0.15	10
1.00	3.1	2.0	0.15	10	1.00	3.3	2.2	0.15	10
1.00	3.3	2.2	0.15	10	1.00	3.1	2.0	0.15	10
1.00	1.83	1.233	0.156	10 & 10	1.00	3.5	2.3	0.15	10
1.00	3.5	2.3	0.15	10	1.00	1.83	1.233	0.156	10 & 10
1.00	3.1	2.0	0.15	10	1.00	3.5	2.3	0.15	10
1.00	4.8	3.2	0.15	10	1.00	3.1	2.0	0.15	10
1.00	3.5	2.3	0.15	10	1.00	4.5	3.0	0.15	10
1.00	4.5	3.0	0.15	10	1.00	3.6	2.4	0.15	10
1.00	3.8	2.5	0.15	10	1.00	4.5	3.0	0.15	10
1.00	2.8	1.8	0.15	10	1.00	3.8	2.5	0.15	10
1.00	3.6	2.4	0.15	10	1.00	2.8	1.8	0.15	10
1.00	7.8	5.2	0.15	10	1.00	3.6	2.4	0.15	10
1.00	2.0	1.33	0.167	10 & 10	1.00	7.8	5.2	0.15	10
1.00	4.2	2.8	0.15	10	1.00	2.0	1.33	0.167	10 & 10
1.00	2.5	1.7	0.15	10	1.00	4.2	2.8	0.15	10
1.00	3.2	2.1	0.15	10	1.00	7.8	5.2	0.15	10
1.00	6.8	4.6	0.15	10	1.00	2.8	1.8	0.15	10
1.00	6.8	4.6	0.15	10	1.00	7.1	4.7	0.15	10
1.00	2.2	1.5	0.15	10	1.00	6.8	4.6	0.15	10
1.00					1.00	2.2	1.5	0.15	10

Note c—Power delivered at 6,600 volts.

Note d—Power delivered at 4,000 or 2,200 volts.



## STATEMENT

## Cost of Power to Hydro Municipalities

Municipality	Interim rates at which power is billed to the municipality and adjusted to cost at the end of the year											
	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923
	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.
Tecumseh.....d											59.07	52.00
Teeswater.....d											40.00	50.00
Thamesford.....d			45.00	45.00	45.00	45.00	45.00	50.00	50.00	50.00	54.00	50.00
Thamesville.....d					45.40	45.40	45.40	50.00	60.00	55.00	55.00	50.00
Theford.....d											110.00	110.00
Thorndale.....d			45.00	45.00	45.00	45.00	45.00	50.00	60.00	60.00	70.00	70.00
Thornton.....d							43.00	43.00	85.00	85.00	85.00	85.00
Thorold.....b											22.25	22.25
Tilbury.....d				39.45	39.45	39.45	39.45	45.00	50.00	50.00	50.00	45.00
Tillsonburg.....b	32.00	32.00	32.00	32.00	35.00	35.00	35.00	32.00	30.00	30.00	39.00	45.00
Toronto.....b	18.50	15.00	15.00	15.00	14.50	14.50	14.50	14.50	14.50	17.00	22.00	24.00
Toronto Twp.....d								25.00	25.00	25.00	30.00	30.00
Tottenham.....d							51.00	51.00	85.00	90.00	90.00	90.00
Uxbridge.....d											90.00	90.00
Vaughan Twp.....d											36.00	36.00
Victoria Harbor...d				35.00	35.00	35.00	35.00	35.00	50.00	45.00	45.00	40.00
Walkerville.....a			38.00	38.00	38.00	38.00	38.00	36.00	36.00	35.00	35.00	33.00
Wallaceburg.....d				38.45	38.45	38.45	38.45	38.00	38.45	35.00	35.00	35.00
Wardsville.....d											82.20	82.20
Warkworth.....d												85.51
Waterdown.....d	37.50	26.00	26.00	26.00	26.00	26.00	26.00	26.00	26.00	31.00	36.00	36.00
Waterford.....d				39.00	39.00	39.00	39.00	39.00	33.00	33.00	38.00	35.00
Waterloo.....b	26.00	23.50	22.50	22.50	22.00	21.00	21.00	20.00	20.00	21.00	26.00	28.00
Watford.....d						59.45	59.45	55.00	85.00	85.00	85.00	70.00
Waubaushehene...d				35.00	35.00	25.00	25.00	30.00	45.00	45.00	45.00	40.00
Welland.....b		14.50	14.00	14.00	14.00	14.00	14.00	14.00	14.00	16.00	20.00	23.00
Wellesley.....d						39.96	39.96	39.00	39.00	39.00	43.00	44.00
Wellington.....d								52.76	52.76	52.76	50.00	50.00
West Hamilton, ext			Served by		Anca							
West Lorne.....d						55.60	55.60	55.00	55.00	50.00	45.00	40.00
Weston.....b	30.00	30.00	30.00	30.00	30.00	30.00	30.00	25.00	23.00	23.00	29.00	30.00
Williamsburg.....d				25.09	30.00	30.00	30.00	30.00	50.00	73.89	75.00	75.00
Winchester.....d			38.28	39.54	43.00	43.00	43.00	43.00	69.84	85.00	85.00	65.00
†Windsor.....a			38.00	38.00	38.00	38.00	38.00	36.00	36.00	35.00	35.00	33.00
Wingham.....d											45.00	55.00
Woodbridge.....d				33.83	33.83	33.83	33.83	33.00	31.00	31.00	37.00	38.00
Woodstock.....b	26.00	23.00	23.00	23.00	23.00	21.00	21.00	20.00	20.00	21.00	27.00	28.00
Woodville.....d				70.24	70.00	50.00	50.00	55.00	80.00	80.00	80.00	75.00
Wyoming.....d					38.34	38.34	38.34	38.00	60.00	60.00	60.00	62.00
York Twp.....d												
Zurich.....d							69.34	69.00	60.00	60.00	74.00	74.00

Note a—Power delivered at 46,000, 26,400 or 22,000 volts.

Note b—Power delivered at 13,200 or 12,000 volts.

†Windsor rates for 60 cycle power are 25% higher than rates given here.

## "F"—Concluded

## and Power Rates to Consumers

Power rates to consumers

1922					1923				
Service charge per horsepower per month	1st 50 hr. per month per kw-hr.	2nd 50 hr. per month per kw-hr.	All additional per kw-hr.	Prompt payment discount	Service charge per horsepower per month	1st 50 hr. per month per kw-hr.	2nd 50 hr. per month per kw-hr.	All additional per kw-hr.	Prompt payment discount
\$ c.	cents	cents	cents	%	\$ c.	cents	cents	cents	%
1.00	4.9	3.3	0.15	10	1.00	4.9	3.3	0.15	10
1.00	4.2	2.8	0.15	10	1.00	4.2	2.8	0.15	10
1.00	5.4	3.6	0.15	10	1.00	4.9	3.3	0.15	10
1.00	6.1	4.1	0.15	10	1.00	5.1	3.4	0.15	10
1.00	9.0	6.0	0.15	10	1.00	9.0	6.0	0.15	10
1.00	5.6	3.8	0.15	10	1.00	5.6	3.8	0.15	10
1.00	6.8	4.6	0.15	10	1.00	6.8	4.6	0.15	10
1.00	2.0	1.4	0.15	10	1.00	2.0	1.4	0.15	10
1.00	4.9	3.3	0.15	10	1.00	4.2	2.8	0.15	10
1.00	3.5	2.3	0.15	10	1.00	3.6	2.4	0.15	10
†A.C. 1.25 & 1.00	1.5	0.75	0.4	10	†A.C. 1.25 & 1.00	1.5	0.75	0.4	10
†D.C. 1.35 & 1.00	2.5	1.25	0.6	10	†D.C. 1.35 & 1.00	2.5	1.25	0.6	10
1.00	4.2	2.8	0.15	10	1.00	4.2	2.8	0.15	10
1.00	6.8	4.6	0.15	10	1.00	6.8	4.6	0.15	10
1.00	7.5	5.0	0.15	10	1.00	7.5	5.0	0.15	10
1.00	5.5	3.7	0.15	10	1.00	5.5	3.7	0.15	10
1.00	5.6	3.8	0.15	10	1.00	4.2	2.8	0.15	10
1.00	3.1	2.0	0.15	10	1.00	2.9	1.9	0.15	10
1.00	3.2	2.1	0.15	10	1.00	2.9	1.9	0.15	10
1.00	8.6	5.7	0.15	10	1.00	8.6	5.7	0.15	10
.....	.....	.....	.....	.....	1.00	10.7	7.2	0.15	10
1.00	3.3	2.2	0.15	10	1.00	3.3	2.2	0.15	10
1.00	3.1	2.0	0.15	10	1.00	3.1	2.0	0.15	10
1.00	2.33	1.56	0.167	10 & 10	1.00	2.2	1.5	0.15	10
1.00	7.1	4.7	0.15	10	1.00	6.4	4.3	0.15	10
1.00	4.9	3.3	0.15	10	1.00	4.9	3.3	0.15	10
1.00	1.67	1.11	0.133	10 & 10	1.00	2.33	1.56	0.167	10 & 10
1.00	4.3	2.9	0.15	10	1.00	4.7	3.1	0.15	10
1.00	5.4	3.6	0.15	10	1.00	5.4	3.6	0.15	10
1.00	2.8	1.8	0.15	10	1.00	2.8	1.8	0.15	10
1.00	4.7	3.1	0.15	10	1.00	4.3	2.9	0.15	10
1.00	2.33	1.56	0.167	10 & 10	1.00	2.2	1.5	0.15	10
1.00	6.4	4.3	0.15	10	1.00	6.4	4.3	0.15	10
1.00	6.4	4.3	0.15	10	1.00	6.4	4.3	0.15	10
1.00	3.1	2.0	0.15	10	1.00	2.9	1.9	0.15	10
1.00	5.4	3.6	0.15	10	1.00	5.4	3.6	0.15	10
1.00	3.1	2.0	0.15	10	1.00	3.1	2.0	0.15	10
1.00	2.11	1.39	0.167	10 & 10	1.00	2.0	1.4	0.15	10
1.00	6.8	4.6	0.15	10	1.00	6.8	4.6	0.15	10
1.00	7.1	4.7	0.15	10	1.00	7.1	4.7	0.15	10
1.00	2.11	1.39	0.167	10 & 10	1.00	2.11	1.39	0.167	10 & 10
1.00	6.8	4.6	0.15	10	1.00	6.1	4.1	0.15	10

†1.25 and 1.35 for 1st 10 h.p. 1.00 for all additional h.p.

Note c—Power delivered at 6,600 volts.

Note d—Power delivered at 4,000 or 2,200 volts.

# STATEMENT

## Lighting Rates in

Municipality	1922								
	Domestic				Commercial				Prompt payment discount
	Service charge per 100 sq. ft.	1st 3 kw-hr per 100 sq. ft. per kw-hr.	All additional per kw-hr	Minimum net monthly bill	1st 30 hr. per kw-hr	Next 70 hr. per kw-hr	All additional per kw-hr	Minimum net monthly bill	
	cents	cents	cents	\$ c.	cents	cents	cents	\$ c.	%
Acton.....	3	3	1.5	0.75	6	3	0.6	0.75	10
Agincourt.....									
Ailsa Craig.....	3	5	2	0.75	10	5	1.0	0.75	10
Alexandria.....	3	7	2	1.50	14	7	1.4	2.00	10
Alliston.....	3	6	2	1.00	12	6	1.2	1.00	10
Alvinston.....	3	8	2	1.50	16	8	1.6	1.50	10
Ancaster.....	3	5	2	0.75	10	5	1	0.75	10
Apple Hill.....	3	7	2	1.50	14	7	1.4	2.00	10
Arthur.....	3	8	2	1.50	16	8	1.6	1.50	10
Aylmer.....	3	4	2	0.75	8	4	0.8	0.75	10
Ayr.....	3	4	2	1.00	8	4	0.8	1.00	10
Baden.....	3	2.5	1.25	0.75	5	2.5	0.5	0.75	10
Barrie.....	3	2	1	0.75	4	2	0.4	0.75	10+10
Barton Twp.....	3	3	1.5	.....	5	2.5	0.15	1.00	10
Beachville.....	3	3	1.5	.....	6	3	0.6	0.75	10
Beaverton.....	3	4.5	2	1.25	9	4.5	0.9	1.25	10
Beeton.....	3	8	2	1.50	16	8	1.6	1.50	10
Belle River.....									
Blenheim.....	3	4.5	2	0.75	9	4.5	0.9	0.75	10
Bloomfield.....	3	7	2	1.00	14	7	1.4	1.00	10
Bolton.....	3	6	2	1.00	12	6	1.2	1.00	10
Bothwell.....	3	5	2	1.00	10	5	1.0	1.00	10
Bradford.....	3	8	2	1.50	16	8	1.6	1.50	10
Brampton.....	3	2	1	0.75	4	2	0.4	0.75	10
Brantford.....	3	2	1	0.75	3.5	1.75	0.35	0.75	10
Brantford Twp....	3	3	1.5	1.00	6	3	0.6	1.00	10
Brechin.....	3	8	2	1.50	16	8	1.6	1.50	10
Bridgeport.....	3		Kitchen	ener rate +10%					
Brigden.....	3	6	2	1.00	12	6	1.2	1.00	10
Brockville.....	3	6	2	1.00	12	6	1.2	1.00	10
Bullock's Corners and Greensville ..	3	4	2	.....	8	4	0.8	1.00	10
Burford.....	3	7	2	1.50	14	7	1.4	1.50	10
Burgessville.....	3	5.5	2	0.75	11	5.5	1.1	0.75	10
Caledonia.....	3	3	1.5	0.75	6	3	0.6	0.75	10
Cannington.....	3	5	2	1.50	10	5	1	1.50	10
Carleton Place.....	3	4.5	2	1.00	9	4.5	0.9	1.00	10
Chatham.....	3	3	1.5	0.75	6	3	0.6	0.75	10
Chatsworth.....	3	7	2	1.50	14	7	1.4	1.50	10
Chesley.....	3	6	2	1.25	12	6	1.2	1.25	10
Chesterville.....	3	7	2	1.50	14	7	1.4	1.50	10
Chippawa.....	3	4	2	1.00	8	4	0.8	1.00	10
Clinton.....	3	3.5	1.75	0.75	7	3.5	0.7	0.75	10
Coldwater.....	3	5	2	1.00	10	5	1	1.00	10
Collingwood.....	3	3	1.5	1.00	6	3	0.6	1.00	10
Comber.....	3	6	2	1.25	12	6	1.2	1.25	10



“G”

Hydro Municipalities

1923

Domestic				Commercial				Prompt payment discount
Service charge per 100 sq. ft.	1st 3 kw- hr. per 100 sq. ft. per kw-hr.	All additional per kw-hr.	Minimum net monthly bill	1st 30 hr. per kw-hr.	Next 70 hr. per kw-hr.	All additional per kw-hr.	Minimum net monthly bill	
cents	cents	cents	\$ c.	cents	cents	cents	\$ c.	%
3	3	1.5	0.75	6	3	0.6	0.75	10
3	5.5	2	0.75	11	5.5	1.1	0.75	10
3	4	2	0.75	8	4	0.8	0.75	10
3	7	2	1.50	14	7	1.4	2.00	10
3	6	2	1.00	12	6	1.2	1.00	10
3	8	2	1.50	16	8	1.6	1.50	10
3	5	2	0.75	10	5	1	0.75	10
3	7	2	1.50	14	7	1.4	2.00	10
3	8	2	1.50	16	8	1.6	1.50	10
3	3	1.5	0.75	6	3	0.6	.75	10
3	3	1.5	1.00	6	3	0.6	1.00	10
3	2.5	1.25	0.75	5	2.5	0.5	0.75	10
3	2	1	0.75	4	2	0.4	0.75	10+10
3	3	1.5	1.00	6	3	0.6	1.00	10
3	3	1.5	0.75	6	3	0.6	0.75	10
3	4	2	1.00	8	4	0.8	1.00	10
3	6	2	1.50	12	6	1.2	1.50	10
3	8	2	1.50	16	8	1.6	1.50	10
3	3	1.5	0.75	6	3	0.6	0.75	10
3	7	2	1.00	14	7	1.4	1.00	10
3	6	2	1.00	12	6	1.2	1.00	10
3	4	2	1.00	8	4	0.8	1.00	10
3	8	2	1.50	16	8	1.6	1.50	10
3	2	1	0.75	4	2	0.4	0.75	10
3	2	1	0.75	3.5	1.75	0.35	0.75	10
3	3	1.5	1.00	6	3	0.6	1.00	10
3	8	2	1.50	16	8	1.6	1.50	10
3	6	2	1.00	12	6	1.2	1.00	10
3	5	2	1.00	10	5	1	1.00	10
3	4	2	.....	8	4	0.8	1.00	10
3	6	2	1.25	12	6	1.2	1.25	10
3	5.5	2	0.75	11	5.5	1.1	0.75	10
3	2.5	1.25	0.75	5	2.5	0.5	0.75	10
3	4	2	1.25	8	4	0.8	1.25	10
3	4	2	1.00	8	4	0.8	1.00	10
3	2.5	1.25	0.75	5	2.5	0.5	0.75	10
3	6	2	1.50	12	6	1.2	1.50	10
3	5	2	1.00	10	5	1	1.00	10
3	6	2	1.50	12	6	1.2	1.50	10
3	3	1.5	1.00	6	3	0.6	1.00	10
3	3	1.5	0.75	6	3	0.6	0.75	10
3	4	2	1.00	8	4	0.8	1.00	10
3	2	1	1.00	4	2	0.4	1.00	10
3	5	2	1.25	10	5	1	1.25	10

# STATEMENT

## Lighting Rates in

Municipality	1922								
	Domestic				Commercial				Prompt payment discount
	Service charge per 100 sq. ft.	1st 3 kw-hr per 100 sq. ft. per kw-hr.	All additional per kw-hr	Minimum net monthly bill	1st 30 hr. per kw-hr	Next 70 hr. per kw-hr	All additional per kw-hr	Minimum net monthly bill	
	cents	cents	cents	\$ c.	cents	cents	cents	\$ c.	%
Cookstown.....	3	7	2	1.50	14	7	1.4	1.50	10
Creemore.....	3	6	2	1.00	12	6	1.2	1.00	10
Dashwood.....	3	7	2	0.75	14	7	1.4	1.25	10
Delaware.....	3	6	2	1.25	12	6	1.2	1.25	10
Dorchester.....	3	5	2	0.75	10	5	1	0.75	10
Drayton.....	3	6	2	1.25	12	6	1.2	1.25	10
Dresden.....	3	4	2	0.75	8	4	0.8	0.75	10
Drumbo.....	3	6	2	1.00	12	6	1.2	1.00	10
Dublin.....	3	7	2	1.50	14	7	1.4	1.50	10
Dundalk.....	3	5.5	2	1.00	11	5.5	1.1	1.00	10
Dundas.....	3	2	1	0.75	5	2	0.15	0.75	10
Dunnville.....	3	5	2	0.75	10	5	1	0.75	10
Durham.....	3	5	2	1.00	10	5	1	1.00	10
Dutton.....	3	3	1.5	0.75	6	3	0.6	0.75	10
Elmira.....	3	3	1.5	0.75	6	3	0.6	0.75	10
Elmvale.....	3	4.5	2	1.00	9	4.5	0.9	1.00	10
Elmwood.....	3	6	2	1.50	12	6	1.2	1.50	10
Elora.....	3	3	1.5	0.75	6	3	0.6	0.75	10
Embro.....	3	7.5	2	1.50	15	7.5	1.5	1.50	10
Etobicoke Twp.....	3	4	2	0.75	8	4	0.8	0.75	10
Exeter.....	3	4	2	0.75	8	4	0.8	0.75	10
Fergus.....	3	3.5	1.75	0.75	7	3.5	0.7	0.75	10
Flesherton.....	3	5	2	1.50	10	5	1	1.50	10
Ford City.....	3	3	1.5	0.75	6	3	0.6	0.75	10
Forest.....	3	6	2	1.00	12	6	1.2	1.00	10
Galt.....	3	2	1	0.75	4	2	0.4	0.75	10
Gamebridge.....	3+50c	8	4	1.50	16	8	1.6	1.50	10
Georgetown.....	3	2	1	0.75	4	2	0.4	0.75	10
Glencoe.....	3	6	2	1.00	12	6	1.2	1.00	10
Glen Williams, ext..	3	4	2	0.75	8	4	0.8	0.75	10
Goderich.....	3	3.5	1.75	0.75	7	3.5	0.7	0.75	10
Grand Valley.....	3	8	2	1.50	16	8	1.6	1.50	10
Grantham Twp.....				Rural Rates					
Granton.....	3	5	2	1.00	10	5	1	1.00	10
Gravenhurst.....	3	4.5	2	1.00	9	4.5	0.9	1.00	10
Guelph.....	3	2	1	0.75	4	2	0.4	0.75	10
Hagersville.....	3	2.5	1.25	0.75	5	2.5	0.5	0.75	10
Hamilton.....	3	2	1	0.75	3.5	1.75	0.35	0.75	10
Hanover.....	3	4	2	1.00	8	4	0.8	1.00	10
Harriston.....	3	4	2	1.00	8	4	0.8	1.00	10
Havelock.....	3	6	2	0.75	12	6	1.2	0.75	10
Hensall.....	3	6	2	1.00	12	6	1.2	1.00	10
Hespeler.....	3	3	1.5	1.00	6	3	0.6	0.75	10
Highgate.....	3	6	2	1.00	12	6	1.2	1.00	10
Holstein.....	3	9	2	1.50	18	9	1.8	1.50	10

## "G"—Continued

## Hydro Municipalities

1923

Domestic				Commercial				Prompt payment discount
Service charge per 100 sq. ft.	1st 3 kw-hr. per 100 sq. ft. per kw-hr.	All additional per kw-hr.	Minimum net monthly bill	1st 30 hr. per kw-hr.	Next 70 hr. per kw-hr.	All additional per kw-hr.	Minimum net monthly bill	
cents	cents	cents	\$ c.	cents	cents	cents	\$ c.	%
3	6	2	1.50	12	6	1.2	1.50	10
3	4	2	1.00	8	4	0.8	1.00	10
3	7	2	1.25	14	7	1.4	1.25	10
3	6	2	1.25	12	6	1.2	1.25	10
3	4	2	0.75	8	4	0.8	0.75	10
3	6	2	1.25	12	6	1.2	1.25	10
3	3	1.5	0.75	6	3	0.6	0.75	10
3	5	2	1.00	10	5	1	1.00	10
3	6	2	1.50	12	6	1.2	1.50	10
3	4	2	1.00	8	4	0.8	1.00	10
3	2	1	0.75	5	2.5	0.5	0.75	10
3	4	2	0.75	8	4	0.8	0.75	10
3	4	2	1.00	8	4	0.8	1.00	10
3	3	1.5	0.75	6	3	0.6	0.75	10
3	2.5	1.25	0.75	5	2.5	0.5	0.75	10
3	3	1.5	1.00	6	3	0.6	1.00	10
3	5	2	1.25	10	5	1	1.25	10
3	3	1.5	0.75	6	3	0.6	0.75	10
3	6	2	1.50	12	6	1.2	1.50	10
3	4	2	0.75	8	4	0.8	0.75	10
3	3.5	1.75	0.75	7	3.5	0.7	0.75	10
3	3	1.5	0.75	6	3	0.6	0.75	10
3	4	2	1.50	8	4	0.8	1.50	10
3	3	1.5	0.75	6	3	0.6	0.75	10
3	5	2	1.00	10	5	1	1.00	10
3	2	1	0.75	4	2	0.4	0.75	10
3+50c	8	2	1.50	16	8	1.6	1.50	10
3	2	1	0.75	4	2	0.4	0.75	10
3	5	2	1.00	10	5	1	1.00	10
3	4	2	0.75	8	4	0.8	0.75	10
3	3.5	1.75	0.75	7	3.5	0.7	0.75	10
3	6	2	1.25	12	6	1.2	1.25	10
3	4	2	1.00	8	4	0.8	1.00	10
3	3.5	1.75	1.00	7	3.5	0.7	1.00	10
3	2	1	0.75	4	2	0.4	0.75	10
3	2	1	0.75	4	2	0.4	0.75	10
3	2	1	0.75	3.5	1.75	0.35	0.75	10
3	3	1.5	0.75	6	3	0.6	0.75	10
3	4	2	1.00	8	4	0.8	1.00	10
3	6	2	0.75	12	6	1.2	0.75	10
3	6	2	1.25	12	6	1.2	1.25	10
3	2.5	1.25	1.00	5	2.5	0.5	0.75	10
3	5	2	1.00	10	5	1	1.00	10
3	9	2	1.50	18	9	1.8	1.50	10



# STATEMENT

## Lighting Rates in

Municipality	1922								
	Domestic				Commercial				Prompt Payment discount
	Service charge per 100 sq. ft.	1st 3 kw- hr per 100 sq. ft. per kw-hr	All addi- tional per kw-hr	Mini- mum net monthly bill	1st 30 hr. per kw-hr	Next 70 hr. per kw-hr	All addi- tional per kw-hr	Mini- mum net monthly bill	
	cents	cents	cents	\$ c.	cents	cents	cents	\$ c.	%
Hornings Mills.....	3	7	3.5	1.50	14	7	1.4	1.50	10
Huntsville.....	3	6	2	1.00	12	6	1.2	1.00	10
Ingersoll.....	3	2	1	0.75	4	2	0.4	0.75	10
Kemptville.....	3	8	2	1.65	16	8	1.6	2.50	10
Kincardine.....	3	6	2	1.50	12	6	1.2	1.50	10
Kingston.....	3	3.5	1.75	0.75	7	3.5	0.4	0.75	10
Kirkfield.....	3	6	2	1.50	12	6	1.2	1.50	10
Kitchener.....	3	2	1	0.75	4	2	0.4	0.75	10
Lakefield.....	3	6	2	1.00	12	6	1.2	1.00	10
Lambeth.....	3	6	2	1.25	12	6	1.2	1.25	10
Lanark.....	3	8	2	1.65	16	8	1.6	2.50	10
Lancaster.....	3	8	2	1.75	16	8	1.6	2.50	10
Listowel.....	3	4	2	0.75	8	4	0.8	0.75	10
London.....	3	2	1	0.75	4	2	0.4	0.75	10
London Twp. V. A..	3	3	1.5	.....	.....	.....	.....	.....	.....
Lucan.....	3	4	2	0.75	8	4	0.8	0.75	10
Lucknow.....	3	7.5	2	1.50	15	7.5	1.5	1.50	10
Lynden.....	3	4.5	2	1.50	9	4.5	0.9	1.50	10
Markdale.....	3	4	2	1.00	8	4	0.8	1.00	10
Markham.....	3	7	2	1.00	14	7	1.4	1.00	10
Marmora.....	3	7	2	1.00	14	7	1.4	1.00	10
Martintown.....	3	7	2	1.50	14	7	1.4	2.00	10
Maxville.....	3	8	2	1.50	16	8	1.6	2.00	10
Merlin.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Merritton.....	3	2	1	0.75	4	2	0.4	0.75	10
Midland.....	3	3	1.5	0.75	6	3	0.6	0.75	10
Milton.....	3	3	1.5	0.75	6	3	0.6	0.75	10
Milverton.....	3	3.5	1.75	0.75	7	3.5	0.7	0.75	10
Mimico.....	3	2	1	0.75	4	2	0.4	0.75	10
Mitchell.....	3	3	1.5	0.75	6	3	0.6	0.75	10
Moorefield.....	3	7	2	1.50	14	7	1.4	1.50	10
Mount Brydges....	3	6	2	1.25	12	6	1.2	1.25	10
Mount Forest.....	3	5.5	2	1.00	11	5.5	1.1	1.00	10
Neustadt.....	3	7	2	1.50	14	7	1.4	1.50	10
Newbury.....	3	8	2	1.00	16	8	1.6	1.00	10
New Hamburg.....	3	3	1.5	0.75	6	3	0.6	0.75	10
New Toronto.....	3	3	1.5	0.75	6	3	0.6	0.75	10
Niagara Falls.....	3	2	1	0.75	4	1.5	0.15	0.75	10
Niagara-on-the- Lake.....	3	3	1.5	0.75	6	3	0.6	0.75	10
Norwich.....	3	3	1.5	0.75	6	3	0.6	0.75	10
Norwood.....	3	5	2	0.75	10	5	1	0.75	10
Oil Springs.....	3	5	2	1.00	10	5	1	1.00	10
Omamee.....	3	5	2	1.00	10	5	1	1.00	10
Orangeville.....	3	5	2	1.00	10	5	1	1.00	10
Ottawa.....	3	2	1.5	0.75	4	2	0.4	0.75	10

## “ G ”—Continued

## Hydro Municipalities

1923								
Domestic				Commercial				Prompt payment discount
Service charge per 100 sq. ft.	1st 3 kw- hr. per 100 sq. ft. per kw-hr.	All additional per kw-hr.	Minimum net monthly bill	1st 30 hr. per kw-hr.	Next 70 hr. per kw-hr.	All additional per kw-hr.	Minimum net monthly bill	
cents	cents	cents	\$ c.	cents	cents	cents	\$ c.	%
3	7	2	1.50	14	7	1.4	1.50	10
3	6	2	1.00	12	6	1.2	1.00	10
3	2	1	0.75	4	2	0.4	0.75	10
3	6	2	1.50	12	6	1.2	2.00	10
3	6	2	1.50	12	6	1.2	1.50	10
3	3.5	1.75	0.75	7	3.5	0.7	0.75	10
3	5	2	1.50	10	5	1	1.50	10
3	2	1	0.75	4	2	0.4	0.75	10
3	6	2	1.00	12	6	1.2	1.00	10
3	5	2	1.25	10	5	1	1.25	10
3	7	2	1.50	14	7	1.4	2.00	10
3	8	2	1.75	16	8	1.6	2.50	10
3	3	1.5	0.75	6	3	0.6	0.75	10
3	2	1	0.75	4	2	0.4	0.75	10
6	4	2	1.00	8	4	0.8	1.00	10
3	4	2	0.75	8	4	0.8	0.75	10
3	6	2	1.50	12	6	1.2	1.50	10
3	4	2	1.25	8	4	0.8	1.25	10
3	3	1.5	1.00	6	3	0.6	1.00	10
3	6	2	1.00	12	6	1.2	1.00	10
3	7	2	1.00	14	7	1.4	1.00	10
3	7	2	1.50	14	7	1.4	2.00	10
3	8	2	1.50	16	8	1.6	2.00	10
3	8	2	1.80	16	8	1.6	2.25	10
3	2	1	0.75	4	2	0.4	0.75	10
3	2	1	0.75	4	2	0.4	0.75	10
3	3	1.5	0.75	6	3	0.6	0.75	10
3	3.5	1.75	0.75	7	3.5	0.7	0.75	10
3	2.5	1.25	0.75	5	2.5	0.5	0.75	10
3	3	1.5	0.75	6	3	0.6	0.75	10
3	7	2	1.50	14	7	1.4	1.50	10
3	5	2	1.25	10	5	1	1.25	10
3	4	2	1.00	8	4	0.8	1.00	10
3	6	2	1.50	12	6	1.2	1.50	10
3	8	2	1.00	16	8	1.6	1.00	10
3	3	1.5	0.75	6	3	0.6	0.75	10
3	3	1.5	0.75	6	3	0.6	0.75	10
3	2	1	0.75	4	1.5	0.15	0.75	10
3	2	1	0.75	4	2	0.4	0.75	10
3	3	1.5	0.75	6	3	0.6	0.75	10
3	5	2	0.75	10	5	1	0.75	10
3	5	2	1.00	10	5	1	1.00	10
3	5	2	1.00	10	5	1	1.00	10
3	5	2	1.00	10	5	1	1.00	10
3	2	1.5	0.75	4	2	0.4	0.75	10

# STATEMENT

## Lighting Rates in

Municipality	1922								
	Domestic				Commercial				Prompt payment discount
	Service charge per 100 sq. ft.	1st 3 kw-hr per 100 sq. ft.	All additional per kw-hr	Minimum net monthly bill	1st 30 hr. per kw-hr	Next 70 hr. per kw-hr	All additional per kw-hr	Minimum net monthly bill	
	cents	cents	cents	\$ c.	cents	cents	cents	\$ c.	%
Otterville.....	3	5	2	0.75	10	5	1	0.75	10
Owen Sound.....	3	3	1.5	0.75	6	3	0.6	0.75	10
Paisley.....	3	3	1.5	0.75	6	3	0.6	0.75	10
Palmerston.....	3	2	1	0.75	4	2	0.4	0.75	10
Parkhill.....	3	7	2	1.25	14	7	1.4	1.25	10
Penetang.....	3	4	2	1.00	8	4	0.8	1.00	10
Perth.....	3	5	2	1.00	10	5	1.0	1.00	10
Peterboro.....	3	2.5	1.25	0.75	5	2.5	0.5	0.75	10
Petrolia.....	3	3	1.5	0.75	6	3	0.6	0.75	10
Plattsville.....	3	6	2	1.00	12	6	1.2	1.00	10
Pictou.....	3	4	2	0.75	8	4	0.8	0.75	10
Point Edward.....	3	2	1	0.75	5	2.5	0.5	0.75	10
Port Arthur.....	3	3	1.5	0.75	6	3	0.6	0.75	10
Port Credit.....	3	2.5	1.25	0.75	5	2.5	0.5	0.75	10
Port Dalhousie.....	3	4.5	2	0.75	9	4.5	0.9	0.75	10
Port Dover.....	3	6	2	1.25	12	6	1.2	1.25	10
Port McNicoll.....	3	5	2	1.25	10	5	1	1.25	10
Port Perry.....	3	8	2	2.00	16	8	1.6	1.00	10
Port Robinson, ext..	3	3	1.5	0.75	6	3	0.6	0.75	10
Port Stanley.....	3	4	2	0.75	8	4	0.8	0.75	10
Prescott.....	3	4	2	1.25	8	4	0.8	1.25	10
Preston.....	3	2.5	1.25	0.75	5	2.5	0.5	0.75	10
Priceville.....	3	7.5	2	1.50	15	7.5	1.5	1.50	10
Princeton.....	3	7.5	2	1.50	15	7.5	1.5	1.50	10
Queenston.....	3	3	1.5	1.25	6	3	0.6	1.25	10
Ridgetown.....	3	3	1.5	0.75	6	3	0.6	0.75	10
Ripley.....	3	7.5	2	1.50	15	7.5	1.5	1.50	10
Riverside.....	3	5	2	0.75	10	5	1	0.75	20
Rockwood.....	3	4	2	1.00	8	4	0.8	1.00	10
Rodney.....	3	5	2	0.75	10	5	1.0	0.75	10
St. Catharines.....	3	2	1	0.75	3.5	1.75	0.35	0.75	10
St. Clair Beach.....	3	7	2	2.00	14	7	1.4	2.00	10
St. George.....	3	4	2	1.00	8	4	0.8	1.00	10
St. Jacobs.....	3	4	2	1.00	8	4	0.8	1.00	10
St. Marys.....	3	3	1.5	0.75	6	3	0.6	0.75	10
St. Thomas.....	3	2	1	0.75	4	2	0.4	0.75	10
Sandwich.....	3	4	2	0.75	8	4	0.8	0.75	10
Sarnia.....	3	3	1.5	0.75	6	3	0.6	0.75	10
Scarboro Twp.....	3	5	2	0.75	10	5	1	0.75	10
Seaforth.....	3	3	1.5	0.75	6	3	0.6	0.75	10
Sebringville, ext....	3	5	2	0.75	10	5	1	0.75	10
Shelburne.....	3	5.5	2	1.25	11	5.5	1.1	1.25	10
Simcoe.....	3	2.5	1.25	0.75	5	2.5	0.5	0.75	10



## "G"—Continued

## Hydro Municipalities

1923								
Domestic				Commercial				Prompt payment discount
Service charge per 100 sq. ft.	1st 3 kw- hr. per 100 sq. ft. per kw-hr.	All additional per kw-hr.	Minimum net monthly bill	1st 30 hr. per kw-hr.	Next 70 hr. per kw-hr.	All additional per kw-hr.	Minimum net monthly bill	
cents	cents	cents	\$ c.	cents	cents	cents	\$ c.	%
3	4	2	1.00	8	4	8	1.00	10
3	2	1	0.75	4	2	0.4	0.75	10
3	8	2	2.00	16	8	1.6	1.50 to 3.00	10
3	3	1.5	0.75	6	3	0.6	0.75	10
3	2	1	0.75	4	2	0.4	0.75	10
3	5	2	1.25	10	5	1	1.25	10
3	3	1.5	1.00	6	3	0.6	1.00	10
3	4	2	1.00	8	4	0.8	1.00	10
3	2.5	1.25	0.75	5	2.5	0.5	0.75	10
3	2.5	1.25	0.75	5	2.5	0.5	0.75	10
3	6	2	1.50	12	6	1.2	1.50	10
3	4	2	0.75	8	4	0.8	0.75	10
3	3	1.5	0.75	6	3	0.6	0.75	10
3	2	1	0.75	5	2.5	0.5	0.75	10
3	3	1.5	0.75	6	3	0.6	0.75	10
3	2.5	1.25	0.75	5	2.5	0.5	0.75	10
3	4	2	1.25	8	4	0.8	1.25	10
3	4	2	1.25	8	4	0.8	1.25	10
3	8	2	2.00	16	8	1.6	1.00	10
3	3	1.5	0.75	6	3	0.6	0.75	10
3	4	2	0.75	8	4	0.8	0.75	10
3	3	1.5	1.00	6	3	0.6	1.00	10
3	2.5	1.25	0.75	5	2.5	0.5	0.75	10
3	8	2	1.50	16	8	1.6	1.50	10
3	6	2	1.50	12	6	1.2	1.50	10
3	3	1.5	1.25	6	3	0.6	1.25	10
3	2.5	1.25	0.75	5	2.5	0.5	0.75	10
3	7.5	2	1.50	15	7.5	1.5	1.50	10
3	5	2	1.25	10	5	1	1.25	10
3	3	1.5	1.00	6	3	0.6	1.00	10
3	4	2	0.75	8	4	0.8	0.75	10
3	2	1	0.75	3.5	1.75	0.35	0.75	10
3	7	2	2.00	14	7	1.4	2.00	10
3	3	1.5	0.75	6	3	0.6	0.75	10
3	4	2	1.00	8	4	0.8	1.00	10
3	2.5	1.25	0.75	5	2.5	0.5	0.75	10
3	2	1	0.75	4	2	0.4	0.75	10
3	4	2	0.75	8	4	0.8	0.75	10
3	3	1.5	0.75	6	3	0.6	0.75	10
3	4	2	0.75	8	4	0.8	0.75	10
3	3	1.5	0.75	6	3	0.6	0.75	10
3	5	2	0.75	10	5	1	0.75	10
3	5	2	1.25	10	5	1	1.25	10
3	2	1	0.75	4	2	0.4	0.75	10

# STATEMENT

## Lighting Rates in

Municipality	1922								
	Domestic				Commercial				Prompt payment discount
	Service charge per 100 sq. ft.	1st 3 kw-hr per 100 sq. ft. per kw-hr	All additional per kw-hr	Minimum net monthly bill	1st 30 hr. per kw-hr	Next 70 hr. per kw-hr	All additional per kw-hr	Minimum net monthly bill	
	cents	cents	cents	\$ c.	cents	cents	cents	\$ c.	%
Smiths Falls.....	3	5	2	1.00	10	5	1	1.00	10
Springfield.....	3	7	2	1.00	14	7	1.4	1.00	10
Stamford Twp.....	3	3	1.5	0.75	6	3	0.6	0.75	10
Stayner.....	3	5	2	1.00	10	5	1	1.00	10
Stouffville.....									
Stratford.....	3	2	1	0.75	4	2	0.4	0.75	10
Strathroy.....	3	3	1.5	0.75	6	3	0.6	0.75	10
Sunderland.....	3	8	2	1.50	16	8	1.6	1.50	10
Sutton.....									
Tara.....	3	8	2	1.50	16	8	1.6	1.50	10
Tavistock.....	3	2.5	1.25	1.00	5	2.5	0.5	1.00	10
Tecumseh.....	3	5	2	1.50	10	5	1	1.50	10
Teeswater.....	3	5	2	1.50	10	5	1	1.50	10
Thamesford.....	3	6	2	0.75	12	6	1.2	0.75	10
Thamesville.....	3	5	2	1.00	10	5	1	1.00	10
Thedford.....	3	9	2	1.50	18	9	1.8	1.50	10
Thorndale.....	3	6.5	2	1.25	13	6.5	1.3	1.25	10
Thornton.....	3	7	2	1.50	14	7	1.4	1.50	10
Thornhill.....	3	2	1	0.75	5	2	0.5	0.75	10
Tilbury.....	3	5	2	1.25	10	5	1	1.25	10
Tillsonburg.....	3	3	1.5	0.75	6	3	0.6	0.75	10
Toronto.....	3	2	1	0.75	5	3	1	0.75	10
Toronto Twp.....	1.50	4	2						
Tottenham.....	3	8	2	1.50	16	8	1.6	1.50	10
Uxbridge.....	3	8	2	2.00	16	8	1.6	1.00	10
Vaughan Twp.....				Rural	Rates				
Victoria Harbor....	3	5	2	1.00	10	5	1	1.00	10
Walkerville.....	3	3	1.5	0.75	6	3	0.6	0.75	10
Wallaceburg.....	3	4	2	0.75	8	4	0.8	0.75	10
Wardsville.....	3	8	2	1.50	16	8	1.6	1.50	10
Warkworth.....									
Waterdown.....	3	3	1.5	0.75	6	3	0.6	0.75	10
Waterford.....	3	3	1.5	0.75	6	3	0.6	0.75	10
Waterloo.....	3	2	1	0.75	4	2	0.4	0.75	10
Watford.....	3	6	2	1.00	12	6	1.2	1.00	10
Waubashene.....	3	6	2	1.00	12	6	1.2	1.00	10
Welland.....	3	2	1	0.75	4	2	0.4	0.75	10
Wellesley.....	3	4	2	1.00	8	4	0.8	1.00	10
Wellington.....	3	6	2	1.00	12	6	1.2	1.00	10
West Hamilton, ext.	3	4	2		8	4	0.8	0.75	10
West Lorne.....	3	5	2	0.75	10	5	1	0.75	10
Weston.....	3	2	1	0.75	4	2	0.4	0.75	10
Williamsburg.....	3	6	2	1.50	12	6	1.2	1.50	10
Winchester.....	3	6	2	1.50	12	6	1.2	1.50	10
Windsor.....	3	3	1.5	0.75	6	3	0.6	0.75	10

“ G ”—Continued  
Hydro Municipalities

1923								
Domestic				Commercial				Prompt payment discount
Service charge per 100 sq. ft.	1st 3 kw- hr. per 100 sq. ft. per kw-hr.	All additional per kw-hr.	Minimum net monthly bill	1st 30 hr. per kw-hr.	Next 70 hr. per kw-hr.	All additional per kw-hr.	Minimum net monthly bill	
cents	cents	cents	\$ c.	cents	cents	cents	\$ c.	%
3	.5	2	1.00	10	5	1	1.00	10
3	6	2	1.00	12	6	1.2	1.00	10
3	3	1.5	0.75	6	3	0.6	0.75	10
3	4	2	1.00	8	4	0.8	1.00	10
3	8	2	1.00	16	8	1.6	1.00	10
3	2	1	0.75	4	2	0.4	0.75	10
3	2.5	1.25	0.75	5	2.5	0.5	0.75	10
3	6	2	1.25	12	6	1.2	1.25	10
2	8	2	1.00	16	8	1.6	1.00	10
3	8	2	1.50	16	8	1.6	1.50	10
3	2.5	1.25	1.00	5	2.5	0.5	1.00	10
3	5	2	1.50	10	5	1	1.50	10
3	5	2	1.50	10	5	1	1.50	10
3	5	2	1.00	10	5	1	1.00	10
3	4	2	1.00	8	4	0.8	1.00	10
3	8	2	1.50	16	8	1.6	1.50	10
3	6	2	1.25	12	6	1.2	1.25	10
3	7	2	1.50	14	7	1.4	1.50	10
3	2	1	0.75	5	2	0.5	0.75	10
3	4	2	1.00	8	4	0.8	1.00	10
3	2.5	1.25	0.75	5	2.5	0.5	0.75	10
3	2	1	0.75	5	3	1	0.75	10
1.50	4	2	.....	.....	.....	.....	.....	.....
3	7	2	1.50	14	7	1.4	1.50	10
3	8	2	2.00	16	8	1.6	1.00	10
3	4	2	Rural	Rates				
3	3	1.5	1.00	8	4	0.8	1.00	10
3	3	1.5	0.75	6	3	0.6	0.75	10
3	3	1.5	0.75	6	3	0.6	0.75	10
3	8	2	1.50	16	8	1.6	1.50	10
3	8	2	2.00-3.15	16	8	1.6	2.00-3.15	10
3	2	1	0.75	4	2	0.4	0.75	10
3	2	1	0.75	4	2	0.4	0.75	10
3	2	1	0.75	4	2	0.4	0.75	10
3	5	2	1.00	10	5	1	1.00	10
3	4	2	1.00	8	4	0.8	1.00	10
3	2	1	0.75	4	2	0.4	0.75	10
3	4	2	1.00	8	4	0.8	1.00	10
3	6	2	1.00	12	6	1.2	1.00	10
3	4	2	.....	8	4	0.8	0.75	10
3	4	2	0.75	8	4	0.8	0.75	10
3	2	1	0.75	4	2	0.4	0.75	10
3	5	2	1.50	10	5	1	1.50	10
3	5	2	1.25	10	5	1	1.25	10
3	3	1.5	0.75	6	3	0.6	0.75	10



STATEMENT  
Lighting Rates in

Municipality	1922								
	Domestic				Commercial				Prompt payment discount
	Service charge per 100 sq. ft.	1st 3-kw- hr per 100 sq. ft. per kw-hr	All addi- tional per kw-hr	Mini- mum net monthly bill	1st 30 hr. per kw-hr	Next 70 hr. per kw-hr	All addi- tional per kw-hr	Mini- mum net monthly bill	
	cents	cents	cents	\$ c.	cents	cents	cents	\$ c.	%
Wingham.....	3	6	2	1.00	12	6	1.2	1.00	10
Woodbridge.....	3	3	1.5	0.75	6	3	0.6	0.75	10
Woodstock.....	3	2	1	0.75	4	2	0.4	0.75	10
Woodville.....	3	7	2	1.50	14	7	1.4	1.50	10
Wyoming.....	3	7.5	2	1.00	15	7.5	1.5	1.00	10
York Twp.....	3	3	1.5	0.75	6	3	0.6	0.75	10
Zurich.....	3	6	2	1.25	12	6	1.2	1.25	10

“ G ”—Concluded

Hydro Municipalities

1923								
Domestic				Commercial				Prompt payment discount
Service charge per 100 sq. ft.	1st 3 kw- hr. per 100 sq. ft. per. kw-hr.	All additional per kw-hr.	Minimum net monthly bill	1st 30 hr. per kw-hr.	Next 70 hr. per kw-hr.	All additional per kw-hr.	Minimum net monthly bill	
cents	cents	cents	\$ c.	cents	cents	cents	\$ c.	%
3	5	2	1.00	10	5	1	1.00	10
3	3	1.5	0.75	6	3	0.6	0.75	10
3	2	1	0.75	4	2	0.4	0.75	10
3	6	2	1.25	12	6	1.2	1.25	10
3	6	2	1.00	12	6	1.2	1.00	10
3	3	1.5	0.75	6	3	0.6	0.75	10
3	5	2	1.25	10	5	1	1.25	10





## APPENDIX I

### ACTS

Chapter 12, 1923.

#### An Act to amend the Power Commission Act.

*Assented to 8th May, 1923.*

**H**IS MAJESTY, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:—

1. This Act may be cited as *The Power Commission Act, 1923*. Short title.

2. By-law No. B1343 of the Corporation of the Town of Brockville; By-laws Nos. 37 and 38 of the Corporation of the Town of Riverside; By-laws Nos. 20 and 21 of the Corporation of the Town of Tecumseh; By-laws Nos. 283 and 308 of the Corporation of the Town of Ford City; By-law No. 769 of the Corporation of the Village of Port Perry; By-laws Nos. 6, 6a, 7 and 9 of 1922 of the Corporation of the Village of Belle River; By-laws Nos. 43, 44 and 45 of the Corporation of the Village of St. Clair Beach; By-law No. 1096 of the Corporation of the Township of Scarborough; By-laws Nos. 934, 937 and 949 of the Corporation of the Township of Toronto; By-law No. 846 of the Corporation of the Township of Mariposa; By-law No. 14 of 1922 of the Corporation of the Township of Lancaster; By-law No. 782 of the Corporation of the Township of Saltfleet; By-law No. 305 of the Corporation of the Township of Oakland; By-law No. 4 of 1922 of the Corporation of the Township of Blandford; By-law No. 654 of the Corporation of the Township of West Oxford; By-law No. 847 of the Corporation of the Township of East Oxford; By-law No. 354 of the Corporation of the Township of Clinton; By-law No. 6 of 1922 of the Corporation of the Township of Usborne; By-law No. 720 of the Corporation of the Township of Rochester; By-law No. 951 of the Corporation of the Township of East Zorra; By-law No. 706 of the Corporation of the Township of Woolwich; By-law No. 139A of the Corporation of the Township of Waterloo; By-law No. 402 of the Corporation of the Township of Grantham; By-law No. 675 of the Corporation of the Township of Anderdon; By-law No. 117 of the Corporation of the Township of Kingston; By-law No. 1093 of the Corporation of the Township of Vaughan; By-law No. 627 of the Corporation of the Township of Lobo; By-law No. 1430 of the Corporation of the Township of Reach; By-law No. 583 of the Corporation of the Township of Sandwich West; By-law No. 505 of the Corporation

of the Township of Sandwich South; By-law No. 615 of the Corporation of the Township of Easthope South; By-law No. 594 of the Corporation of the Township of Easthope North; By-law No. 889 of the Corporation of the Township of Maidstone; By-law No. 868 of the Corporation of the Township of Ekfrid; By-law No. 4 of 1922 of the Corporation of the Township of Hay; By-law No. 669 of the Corporation of the Township of Ancaster; By-law No. 739 of the Corporation of the Township of Blenheim; By-law No. 291 of the Corporation of the Township of Stephen; By-law No. 312 of the Corporation of the Township of Woodhouse; By-law No. 1001 of the Corporation of the Township of Bosanquet; By-law No. 471 of the Corporation of the Township of Oro; By-law No. 13 of the Corporation of the Township of Brant; By-laws Nos. 776 and 798 of the Corporation of the Township of London; By-law No. 4 of 1922 of the Corporation of the Township of Moore; By-laws Nos. 173 and 190 of the Corporation of the Village of Marmora; By-law No. 292 of the Corporation of the Township of Gosfield South; By-law No. 551 of the Corporation of the Township of North Dumfries; By-law No. 883 of the Corporation of the Township of Southwold; By-law No. 625 of the Corporation of the Town of Penetanguishene; and By-laws Nos. 511 and 512 of the Corporation of the Village of Stouffville and all debentures issued or to be issued, or purporting to be issued under any of the said By-laws which authorize the issue of debentures, are confirmed and declared to be legal, valid and binding upon such corporations and the ratepayers thereof, respectively, and shall not be open to question upon any ground whatsoever, notwithstanding the requirements of *The Power Commission Act* or the amendments thereto, or any other Act of this Legislature.

Commence-  
ment of Act.

**3.** This Act shall come into force and take effect on the day upon which it receives the Royal Assent.

Chapter 13, 1923.

### **An Act to amend The Rural Hydro-Electric Distribution Act, 1921.**

*Assented to 8th May, 1923.*

**H**IS MAJESTY, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:—

Short title.

**1.** This Act may be cited as *The Rural Hydro-Electric Distribution Act, 1923.*

**2.** Section 4a of *The Rural Hydro-Electric Distribution Act, 1921*, <sup>1922, c. 32, s. 2</sup> as enacted by section 2 of *The Rural Hydro-Electric Distribution Act*, <sup>repealed.</sup> 1922, is repealed and the following substituted therefor:—

4a. Where the corporation of a township or of an urban municipality supplies or distributes electrical power or energy in an adjoining township or within any such rural power district under the provisions of section 24 of *The Public Utilities Act*, or under any other general or special Act, there may be paid to such corporation upon the recommendation of the Hydro-Electric Power Commission of Ontario and the order of the Lieutenant-Governor in Council, a sum not exceeding fifty per cent. of the capital cost of constructing and erecting in such adjoining township or rural power district, primary transmission lines and cables required for the delivery of power or energy in such adjoining township or any such rural power district.

Payment of grant where municipality is distributor of power.

**3.** This Act shall come into force and take effect on the day upon which it receives the Royal Assent.

Commencement of Act.

Chapter 39, 1923.

### An Act respecting Actions for Negligence against Hydro-Electric Railways.

*Assented to 8th May, 1923.*

**H**IS MAJESTY, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:—

**1.** This Act may be cited as *The Hydro-Electric Negligence Act, 1923*.

Short title.

**2.** Notwithstanding anything contained in any other Act, it shall not be necessary to secure the consent of the Attorney-General before commencing any action against the Hydro-Electric Power Commission of Ontario for damages arising through the negligence of the agents, contractors, officers, employees or servants of the said Commission in the construction, equipment or operation of any electric railway constructed or acquired, equipped and operated by the said Commission under the authority of any Act of this Legislature.

Consent of Attorney-General not necessary in certain actions.

**3.** This Act shall come into force on the day upon which it receives the Royal Assent.

Commencement of Act.



Chapter 40, 1923.

**An Act to amend The Guelph Railway Act, 1921.***Assented to 8th May, 1923.*

**H**IS MAJESTY, by and with the advice and consent of the Legislative Assembly of the Province of Ontario, enacts as follows:—

Short title.

1. This Act may be cited as *The Guelph Railway Act, 1923*.

1921, c. 22,  
s. 4, subs. 1  
amended.

2. Subsection 1 of section 4 of *The Guelph Railway Act, 1921*, is amended by striking out the words "at the rate of six per cent. per annum" in the third line, and inserting in lieu thereof the words "at a rate not exceeding six per cent. per annum" and by striking out the word "twenty" in the fourth line and inserting in lieu thereof the word "fifty" so that the subsection will now read as follows:—

Bond issue  
by Com-  
mission.

(1) The Commission is authorized to issue bonds dated the 1st day of May, 1921, and bearing interest at a rate not exceeding six per cent. per annum payable half-yearly, and maturing not more than fifty years from the said date to the amount of \$150,000.

1921, c. 22,  
s. 5, subs. 1,  
amended.

3. Subsection 1 of section 5 of *The Guelph Railway Act, 1921*, is amended by striking out the words "six per cent. per annum" in the fourth line and inserting in lieu thereof the words "five per cent. per annum" so that the subsection will now read as follows:—

Issue of de-  
bentures.

(1) The Corporation is authorized to issue debentures to an amount not exceeding \$300,000, payable in fifty years from the 1st day of May, 1921, and bearing interest at the rate of five per cent. per annum, payable half-yearly at the Bank of Montreal at Toronto.

Deposit of  
further de-  
bentures.

4. Notwithstanding anything contained in *The Guelph Railway Act, 1921*, or in the agreement set out in the Schedule to the said Act, it shall not be necessary for the municipal corporation of the City of Guelph to issue and deposit with the Hydro-Electric Power Commission any debentures in addition to the debentures to the amount of \$300,000 already so issued and deposited under the authority of section 5 of the said Act until the amount of the bonds issued by the said Commission under the authority of section 4 of the said Act shall exceed the said sum of \$300,000, but the said municipal corporation shall from time to time thereafter upon the requisition in writing of the Commission, issue and deposit with the Commission further similar debentures for the same amount as any increase of the bond issue of the Commission to cover the capital cost of extensions, improvements or additional works or equipment of the said railway, as provided in subsection 3 of section 4 of the said Act.

Commence-  
ment of Act.

5. This Act shall come into force and take effect on the day upon which it receives the Royal Assent.

## APPENDIX II

### TRANSMISSION LINE RECORDS

Corrected to October 31, 1923

including

Summaries of data respecting mileage of transmission lines built or acquired by the Hydro-Electric Power Commission. The sizes, materials, lengths and weights of conductors, and other particulars of the 110,000-volt steel-tower transmission lines, the wood-pole transmission lines and the telephone lines. Also detailed descriptions of the individual lines classified under the various systems.

## TRANSMISSION LINE RECORDS

The total mileage of lines built and acquired by the Commission up to October 31, 1923, for the various systems, excepting rural 4,000-volt districts, is indicated in the following table:

### TOTAL MILEAGE OF TRANSMISSION LINES

System	Miles
Niagara system—110,000-volt, steel-tower line. ....	523.01
Niagara system—46,000-volt and less, steel and wood support (see table following)..	1,106.36
Ontario Power Company.....	90.69
Toronto Power Company.....	246.73
Essex County system.....	63.83
Severn system.....	178.54
Eugenia system.....	316.10
Wasdells system.....	106.25
Muskoka system.....	26.32
St. Lawrence system.....	149.31
Rideau system.....	81.62
Thunder Bay system.....	85.60
Central Ontario and Trent system.....	487.84
Nipissing system.....	24.70
<b>Total.....</b>	<b>3,487.93</b>

Note: Of the above the Niagara system, the Ontario Power Company, the Toronto Power Company, and the Essex County system are operated at 25 cycles. The other systems are operated at 60 cycles.

## 110,000-VOLT STEEL-TOWER TRANSMISSION LINES

### Niagara System

Lines completed and under construction to October 31, 1923. Completed 523.04 miles, under construction 9.81 miles. Total, 523.85 miles.

### TOTAL MILEAGE OF 110,000-VOLT LINES AND NUMBER OF TOWERS

	To Oct. 31, 1922	Oct. 31, 1922 to Oct. 31, 1923	Total to Oct. 31, 1923
Total mileage completed.....	513.81	9.23	523.04
Total mileage under construction.....	.....	9.81	9.81
Total mileage of single-circuit lines completed.....	62.21	.....	62.21
Total mileage of double-circuit lines completed.....	451.60	9.23	460.83
Total mileage of double-circuit lines under construction.....	.....	9.81	9.81
Number of towers erected.....	4,984	58	5,042
Number of towers under construction.....	.....	66	66

### TOTAL WEIGHTS AND MILEAGE OF CONDUCTORS

Cable	MILES OF CONDUCTORS			WEIGHT IN POUNDS		
	Completed to Oct. 31, 1922	Completed Oct. 31, 1922 to Oct. 31, 1923	Under construction Oct. 31, 1923	Completed to Oct. 31, 1922	Completed Oct. 31, 1922 to Oct. 31, 1923	Under construction Oct. 31, 1923
S.R.A.C.*	1,947.99	55.38	53.86	5,653,010	223,054	242,255
Copper...	948.24	.....	.....	2,817,336	.....	.....
<b>Total..</b>	<b>2,896.23</b>	<b>55.38</b>	<b>53.86</b>	<b>8,470,346</b>	<b>223,054</b>	<b>242,255</b>

\* Steel-reinforced aluminum conductor.



## 110,000-VOLT STEEL-TOWER TRANSMISSION LINES—Continued

## SIZE, MATERIAL, LENGTH AND WEIGHT OF CONDUCTORS

Size and material	Miles of conductor			Weight in pounds			Miles of single-circuit lines			Miles of double-circuit lines			Total miles single-and-double-circuit lines completed Oct. 31, 1923
	Completed to Oct. 31, 1922	Completed Oct. 31, 1922, to Oct. 31, 1923	Under construction Oct. 31, 1923	Completed to Oct. 31, 1922	Completed Oct. 31, 1922, to Oct. 31, 1923	Under construction Oct. 31, 1923	Completed to Oct. 31, 1922	Completed Oct. 31, 1922, to Oct. 31, 1923	Under construction Oct. 31, 1923	Completed to Oct. 31, 1922	Completed Oct. 31, 1922, to Oct. 31, 1923	Under construction Oct. 31, 1923	
605,000 c.m., s.r.al.c.	248.82	55.38	50.76	1,024,640	228,054	209,029	....	....	....	41.47	9.23	8.46	50.70
500,000 c.m., "	236.52	....	8.10	970,205	....	33,226	....	....	....	39.42	....	1.35	39.42
336,400 c.m., "	571.14	....	....	1,592,338	....	....	....	....	....	95.19	....	....	95.19
312,000 c.m., "	583.08	....	....	1,507,261	....	....	....	....	....	85.23	....	....	103.13
266,800 c.m., "	303.43	....	....	553,566	....	....	....	....	....	32.25	....	....	70.56
211,600 c.m., copper	331.38	....	....	1,137,627	....	....	....	....	....	55.23	....	....	55.23
167,800 c.m., "	616.86	....	....	1,679,709	....	....	....	....	....	102.81	....	....	102.81
Total.....	2,896.23	55.38	58.86	8,470,346	228,054	242,255	62.21	....	....	451.60	9.23	9.81	523.04

Note: s.r.al.c.—steel-reinforced aluminum conductor.

# WOOD-POLE TRANSMISSION LINES

## TOTAL MILEAGE OF WOOD-POLE LINES

In operation October 31, 1923

System	Miles
Niagara system.....	1,106.36
Essex County system.....	1.13
Ontario Power Company system.....	.....
Toronto Power Company system.....	.....
Severn system.....	178.54
Eugenia system.....	316.10
Wasdells system.....	106.25
Muskoka system.....	26.32
St. Lawrence system.....	149.31
Rideau system.....	81.62
Central Ontario and Trent system.....	146.72
110,000-volt wood-pole lines—Thunder Bay system.....	2,112.35 86.60
Total.....	2,198.95

# WOOD-POLE LINES COMPLETED AND UNDER CONSTRUCTION

For Year Ended October 31, 1923

## MILEAGES AT VARIOUS VOLTAGES

Voltages	Miles completed during year	Miles under construction at October 31, 1923	Total miles
44,000	0.60	2.09	2.69
30,000	3.50	.....	3.50
22,000	.....	13.75	13.75
26,400	27.47	2.45	29.92
12,000	29.50	.....	29.50
4,000	26.94	.....	26.94
2,300	3.50	.....	3.50
Total.....	91.51	18.29*	109.80

\*Does not include lines in Rural power districts.

## MILEAGES FOR THE VARIOUS SYSTEMS

System	Miles
Niagara system.....	68.62
Essex County system.....	.....
Ontario Power Company system.....	.....
Toronto Power Company system.....	.....
Severn system.....	.....
Eugenia system.....	34.99
Wasdells system.....	.....
Muskoka system.....	.....
St. Lawrence system.....	.....
Rideau system.....	.....
Thunder Bay system.....	.....
Central Ontario and Trent system.....	6.10
Total.....	109.80

Span miles: single circuit, 105.66, double circuit, 4.14, total, 109.80

## MATERIAL AND MILEAGE OF CONDUCTORS

## Power Conductors:

	MILES
Steel-reinforced aluminum.....	79.28
Aluminum.....	2.45
Copper.....	11.14
Steel.....	16.93
Total.....	109.80

## Ground Wires and Cables:

1/4" steel cable.....	20.10
9/32" " ".....	9.35
5/16" " ".....	6.44
3 x 13" B.W.G. steel cable.....	35.89
No. 6 B. & S.G. copper wire.....	
Total.....	

## Ground Cable:

Steel.....	29.45
Iron.....	6.49
Copper.....	35.89
Total.....	

## Telephone Wire:

3 x 13 B.W.G. galvanized steel.....	12.63
No. 6 B. & S.G. steel-reinforced aluminum.....	4.14
No. 10 B. & S.G. copper-clad steel.....	16.70
No. 9 B.W.G. galv. iron.....	33.47
Total.....	

## Aluminum Conductor:

No. 2/0 B.&S.G. steel reinforced aluminum.....	20.67
No. 3/0 " " " ".....	2.69
No. 4/0 " " " ".....	11.54
105,530 c.m. " " " ".....	33.68
No. 2 B.&S.G. " " " ".....	10.70
No. 4 B.&S.G. " " " ".....	2.45
500,000 c.m. aluminum.....	81.73
Total.....	

## Copper Conductor:

No. 1 B.&S.G. copper.....	5.70
No. 2 " ".....	5.44
No. 4 " ".....	
No. 6 " ".....	
350,000 c.m. ".....	11.14
Total.....	

## Steel Conductor:

5/16" galv. steel.....	16.93
Total.....	16.93

Note: Average spans between poles: 100 ft., 120 ft., 125 ft., 130 ft., 150 ft., 160 ft., and 175 ft.



## WOOD-POLE TRANSMISSION AND TELEPHONE LINES

## TOTAL MILEAGE OF LINES AND NUMBER OF POLES

Lines	Miles completed		
	To Oct. 31, 1922	Oct. 31, 1922 to Oct. 31, 1923	Totals to Oct. 31, 1923
Low-tension lines completed.....	2,107.44	91.51	2,198.95
Low-tension lines under construction.....	.....	18.29	18.29
Single-circuit lines completed.....	1,620.06	89.82	1,709.88
Double-circuit lines completed.....	461.17	1.69	462.86
Three-circuit lines completed.....	5.74	....	5.74
Four-circuit lines completed.....	20.47	....	20.47
Single-circuit telephone lines completed.....	1,591.48	15.78	1,607.26
Double-circuit telephone lines completed.....	68.20	....	68.20
Three-circuit telephone lines completed.....	0.76	....	0.76
Telephone lines under construction.....	.....	18.29	18.29
<b>Poles and Towers</b>			
Number of poles erected.....	79,040	2,406	81,446
Number of towers erected.....	428	....	428
Number of poles under construction.....	.....	629	629

## TOTAL MILEAGE AND WEIGHT OF CABLE AND WIRE

Cable and wire	Miles of conductor			Weight in pounds		
	Completed to Oct. 31, 1922	Com- pleted Oct. 31, 1922 to Oct. 31, 1923	Under con- struction Oct. 31, 1923	Completed to Oct. 31, 1922	Com- pleted Oct. 31, 1922 to Oct. 31, 1923	Under con- struction Oct. 31, 1923
Aluminum: Transmission.....	3,512.67	.....	14.70	2,558,513	.....	36,456
Steel-reinforced { Transmission .	2,378.70	195.39	47.52	1,911,634	133,158	29,886
aluminum { Telephone....	477.99	21.08	4.18	91,023	3,920	4,698
Copper wire: Transmission....	1,308.57	33.42	.....	1,801,302	18,613	.....
Telephone.....	137.16	.....	.....	22,741	.....	.....
Copper-clad steel: Telephone...	1,240.18	4.58	4.90	209,477	705	1,275
Galv. iron wire: Transmission..	167.28	.....	.....	95,852	.....	.....
Telephone....	1,396.14	5.90	27.50	439,805	1,799	10,187
Galv. steel cable: Transmission	577.38	50.79	.....	588,046	54,853	.....
Telephone...	348.58	.....	.....	142,587	.....	.....
Total.....	11,544.65	311.16	98.80	7,860,980	213,048	72,502

Note: This table does not include the Niagara system 110,000-volt, steel-tower lines.

**WOOD-POLE TRANSMISSION LINES—Continued**  
**MILEAGES TABULATED ACCORDING TO VOLTAGE AND NUMBER OF CIRCUITS**

Voltage	Single circuit totals		Double circuit totals		Three circuit totals		Four circuit totals		1, 2, 3, and 4 circuit totals			
	Com- pleted to Oct. 31, 1922	Under con- struc- tion Oct. 31, 1923	Com- pleted to Oct. 31, 1922	Under con- struc- tion Oct. 31, 1923	Com- pleted to Oct. 31, 1922	Under con- struc- tion Oct. 31, 1923	Com- pleted to Oct. 31, 1922	Under con- struc- tion Oct. 31, 1923	Com- pleted to Oct. 31, 1922	Under con- struc- tion Oct. 31, 1923	Com- pleted to Oct. 31, 1922	Under con- struc- tion Oct. 31, 1923
	75.61	...	...	...	...	...	...	...	75.61	...	...	...
110,000	75.61	...	...	...	...	...	...	...	75.61	...	...	75.61
46,000	294.46	0.60	5.63	...	...	...	15.53	...	315.62	0.60	2.09	316.22
44,000	...	...	...	...	...	...	...	...	...	...	...	...
40,000	...	...	1.00	...	...	...	...	...	1.00	1.00	...	2.00
30,000	310.48	27.47	151.05	2.45	1.48	...	1.10	...	464.11	27.47	2.45	491.58
26,400	259.07	...	189.26	...	0.76	...	...	...	449.05	...	13.75	449.09
22,000	275.55	...	109.55	...	3.50	...	3.84	...	392.44	...	...	392.44
13,200	15.22	28.81	4.68	0.60	...	...	...	...	19.90	29.50	...	49.40
12,000	16.28	...	...	...	...	...	...	...	16.28	...	...	16.28
6,600	337.72	29.44	...	...	...	...	...	...	337.72	29.44	...	367.16
4,000	22.91	3.50	...	...	...	...	...	...	22.91	3.50	...	26.41
2,300	12.76	...	...	...	...	...	...	...	12.76	...	...	12.76
2,200	1,620.06	89.82	461.17	1.69	5.74	...	20.47	...	2,107.44	91.51	18.20	2,198.95
Total.....	1,620.06	89.82	461.17	1.69	5.74	...	20.47	...	2,107.44	91.51	18.20	2,198.95

NOTE:—This sheet is based on route miles.

# WOOD-POLE

## GAUGE LENGTH AND WEIGHT

Size and material of conductor	Miles of conductor			Weight in pounds			Miles Single circuit lines		
	Completed to Oct. 31, 1922	Completed Oct. 31, 1922 to Oct. 31, '23	Under construction Oct. 31, 1923	Completed to Oct. 31, 1922	Completed Oct. 31, 1922 to Oct. 31, 1923	Under construction Oct. 31, 1923	Completed to Oct. 31, 1922	Completed Oct. 31, 1922 to Oct. 31, '23	Under construction Oct. 31, 1923
No. 2 B. & S.G. alum.	461.85			151,949					
No. 1/0 B. & S.G. alum	543.21			284,642			110.49		
No. 2/0 B. & S.G. alum	116.58			76,360			13.48		
No. 3/0 B. & S.G. alum	2,155.95			1,798,062			276.31		
173,000 c.m. alum....	6.30			5,632					
No. 4/0 B. & S.G. alum	215.40			226,170			12.00		
345,000 c.m. alum....	9.18			15,698					
500,000 c.m. alum....			14.70			36,456			2.45
No. 6 B. & S.G. s-r. alum.	9.69			1,860			3.23		
No. 2 B. & S.G. s-r. alum.	1,142.79	59.79	41.25	557,681	29,177	20,130	341.27	19.93	13.75
No. 1/0 B. & S.G. s-r. alum.	444.87	37.62		340,770	28,817		142.49	10.54	
No. 4 B. & S.G. s-r. alum.		32.10			9,822			10.70	
105,530 c.m. s-r. alum	6.00			4,656					
125,000 c.m. s-r. alum	233.34			214,673			77.78		
No. 2/0 B. & S.G. s-r. alum.	42.27	64.08		41,256	62,542		1.75	19.98	
No. 3/0 B. & S.G. s-r. alum.	129.15			158,467			31.39		
No. 4/0 B. & S.G. s-r. alum.	357.90	1.80	6.27	556,892	2,800	9,756	118.54	0.60	2.09
No. 6/0 B. & S.G. s-r. alum.	4.98			13,884			1.66		
366,000 c.m. s-r. alum	7.71			21,495			2.57		
No. 6 B. & S.G. copper	502.52	22.76		215,078	6,985		167.60	11.88	
No. 4 B. & S.G. copper	172.02	17.10		117,586	11,628		55.22	5.70	
No. 3 B. & S.G. copper	6.48			5,560					
No. 2 B. & S.G. copper	74.52			80,631			18.04		
No. 1 B. & S.G. copper	9.00			12,258			3.00		
350,000 c.m. copper..	0.39			2,214			0.13		
No. 1/0 B. & S.G. copper.	217.53			374,152			50.71		
No. 2/0 B. & S.G. copper.	98.67			214,051			32.89		
No. 4/0 B. & S.G. copper.	226.68			782,046					
3 x 13 B. & S. G. galv. steel.	10.60			3,975			10.60		
4 x 12 B. & S. G. galv. steel.	7.12			4,699					
3 x 12 B. & S.G. galv. steel.	45.24			22,394			12.13		
1/4" galv. steel. ....	1,430.20	20.10		986,838	13,869		45.33	20.10	
9/32" galv. steel. ....	404.87			344,139			28.47		
5/16" galv. steel. ....	437.30	60.14		472,284	64,951		116.14	60.14	
7/16" galv. steel. ....	31.50			65,520					
No. 8 B. & S.G. c.c. steel.	0.89			218					
No. 9 B.W.G. iron. ....									
No. 10 B.W.G. iron. ....	5.53			1,382					
No. 6 B.W.G. iron. ....	298.27			170,909			55.76		
Total.....	9,867.40	315.49	62.22	8,346,081	230,591	66,342	1,729.58	159.57	18.29

Note: s-r. alum.—steel-reinforced aluminum; c.c. steel—copper-clad steel.



TRANSMISSION LINES—Continued  
OF CONDUCTORS, INCLUDING GROUND CABLES

Miles Double circuit lines				Miles Three circuit lines				Miles Four circuit lines				Total miles of single, double, three and four circuit lines completed to Oct. 31, 1923
Completed to Oct. 31, 1922	Completed Oct. 31, 1922 to Oct. 31, 1923	Under construction Oct. 31, 1923		Completed to Oct. 31, 1922	Completed Oct. 31, 1922 to Oct. 31, 1923	Under Construction Oct. 31, 1923		Completed to Oct. 31, 1922	Completed Oct. 31, 1922 to Oct. 31, 1923	Under construction Oct. 31, 1923		
30.38				2.19								32.57
34.81				0.08				0.18				145.56
12.69												26.17
218.97								1.10				496.38
1.05												1.05
29.90												41.90
1.53												1.53
		2.45										
												3.23
19.83												381.03
2.90	1.00											156.93
												10.70
1.00												1.00
												77.78
6.17	0.69											28.59
5.83												37.22
0.38												119.52
												1.66
												2.57
												179.48
1.21												62.13
1.08												1.08
3.40												21.44
												3.00
												0.13
10.90												61.61
												32.89
1.02								18.38				19.40
												10.60
												12.13
												65.43
												28.47
3.56												180.44
5.25												5.25
												55.76
391.86	1.69	2.45		2.27				19.66				2,304.63

Note: This sheet is based on circuit and wire miles.

**STEEL-TOWER AND WOOD-POLE TRANSMISSION LINES****TOTAL MILEAGES AND WEIGHTS OF CONDUCTORS—ALL SYSTEMS**

Type of construction	Miles of conductor			Weight in pounds		
	Completed to Oct. 31, 1922	Completed Oct. 31, 1922, to Oct. 31, 1923	Under construction Oct. 31, 1923	Completed to Oct. 31, 1922	Completed Oct. 31, 1922, to Oct. 31, 1923	Under construction Oct. 31, 1923
110,000-volt steel-tower lines.....	2,896.23	55.38	58.86	8,470,346	228,054	242,255
Wood-pole lines built by Commission.....	7,944.60	279.60	146.43	6,955,347	206,624	66,342
Total.....	10,840.83	334.98	205.29	15,425,693	434,678	303,597

NOTE:—This table does not include the rural power districts.

**TELEPHONE LINES****MILEAGE AND SIZES OF WIRE USED ON TELEPHONE LINES**

For Year Ended October 31, 1923

Section No.	Miles	Gauge and material
-------------	-------	--------------------

**Lines completed**

N 179 x 19	1.00	No. 10 B. & S.G. copper-clad steel.
N 1485 x 55	2.95	No. 9 B.W.G. galvanized iron.
N 169 x 9	0.69	No. 10 B. & S. copper-clad steel.
E 30 x 31	10.54	No. 6 B. & S. steel-reinforced aluminum.
C 8 x 64	.060	No. 10 B. & S.G. copper-clad steel.
Total.....	15.78	

**Lines under construction October 31, 1923**

N 15 x 1502	2.45	No. 6 B. & S.G. steel-reinforced aluminum.
E 64 x 14	13.75	No. 9 B.W.G. galvanized iron.
C 69 x 2001	2.09	No. 6 B. & S.G. steel-reinforced aluminum.
Total.....	18.29	

## TELEPHONE LINES

GAUGE, LENGTH AND WEIGHT OF ALUMINUM, COPPER-CLAD STEEL AND GALVANIZED IRON WIRE

Size and material of wire	Miles of wire				Weight in pounds				Single-circuit mileage			Double-circuit mileage			Three-circuit mileage			1-2 & 3- circuit totals
	Completed to Oct. 31, 1922	Completed to Oct. 31, 1922 Under construction to Oct. 31, 1923	Under construction to Oct. 31, 1923	Completed to Oct. 31, 1923	Completed to Oct. 31, 1922	Completed to Oct. 31, 1922 Under construction to Oct. 31, 1923	Under construction to Oct. 31, 1923	Completed to Oct. 31, 1923	Completed to Oct. 31, 1922	Completed to Oct. 31, 1922 Under construction to Oct. 31, 1923	Completed to Oct. 31, 1922	Completed to Oct. 31, 1922 Under construction to Oct. 31, 1923	Completed to Oct. 31, 1922	Completed to Oct. 31, 1922 Under construction to Oct. 31, 1923	Completed to Oct. 31, 1922	Completed to Oct. 31, 1922 Under construction to Oct. 31, 1923		
No. 8 B. & S.G. c-c. steel.	203.18	.....	.....	203.18	49,779	.....	.....	49,779	101.59	.....	.....	.....	.....	.....	.....	.....	.....	101.59
No. 10 B. & S.G. c-c. steel	1,037.00	4.58	4.90	1,041.58	159,698	705	1,275	160,403	463.18	2.29	2.45	.....	.....	.....	.....	.....	.....	466.23
No. 10 B. & S.G. copper ..	137.16	.....	.....	137.16	22,741	.....	.....	22,741	68.58	.....	.....	.....	.....	.....	.....	0.76	.....	68.58
No. 8 B.W.G. galv. iron..	5.70	.....	.....	5.70	2,155	.....	.....	2,155	2.85	.....	.....	.....	.....	.....	.....	.....	.....	2.85
No. 9 B.W.G. galv. iron..	1,321.49	5.90	27.50	1,327.39	408,966	1,799	10,187	410,765	647.84	2.95	13.75	.....	.....	.....	.....	.....	.....	649.79
No. 10 B.W.G. galv. iron.	82.00	.....	.....	82.00	20,500	.....	.....	20,500	41.00	.....	.....	.....	.....	.....	.....	.....	.....	41.00
No. 12 B.W.G. galv. iron.	49.60	.....	.....	49.60	8,184	.....	.....	8,184	24.80	.....	.....	.....	.....	.....	.....	.....	.....	24.80
No. 3x12 B. & S.G. galv. stl.	98.92	.....	.....	98.92	48,965	.....	.....	48,965	49.46	.....	.....	.....	.....	.....	.....	.....	.....	49.46
No. 3x13 B. & S.G. galv. stl.	249.66	.....	.....	249.66	93,622	.....	.....	93,622	124.83	.....	.....	.....	.....	.....	.....	.....	.....	124.83
No. 6 B. & S.G.s-r. alumin.	415.34	21.08	4.18	436.42	91,023	3,920	4,698	94,943	69.35	10.54	2.09	68.20	.....	.....	.....	.....	.....	148.09
Total.....	3,600.05	31.56	36.58	3,631.61	905,633	6,424	16,160	912,057	1,591.48	15.78	18.29	68.20	.....	.....	.....	0.76	.....	1,676.22



## ONTARIO POWER COMPANY

### TABULATION OF TRANSMISSION AND TELEPHONE LINES

Total mileage of Ontario Power Company's lines.....	90.69
Total number of poles erected.....	3,580
Total number of steel towers erected.....	145
Total mileage of single-circuit lines.....	16.23
Total mileage of double-circuit lines.....	74.46

### SIZE, MATERIAL, LENGTH AND WEIGHT OF CONDUCTOR

Size and material	Span miles	Wire miles	Weight in pounds
<b>Aluminum conductor:</b>			
173,000 c.m.....	9.56	53.13	47,498
211,950 c.m.....	6.50	39.00	40,950
345,000 c.m.....	40.75	244.50	418,095
500,000 c.m.....	13.98	83.88	208,022
820,000 c.m.....	12.02	36.06	146,404
Total.....	82.81	456.57	860,969
<b>Steel-reinforced aluminum:</b>			
336,400 c.m.....	1.23	7.38	20,575
Total.....	1.23	7.38	20,575
<b>Copper conductor:</b>			
No. 1/0 B. & S. gauge copper.....	0.36	2.16	3,715
No. 2/0 B. & S. gauge copper.....	2.40	14.40	31,234
No. 3 B. & S. gauge copper.....	3.44	12.24	10,502
No. 6 B. & S. gauge copper.....	0.45	2.70	1,156
Total.....	6.65	31.50	46,607
<b>Telephone line—galvanized iron.....</b>	58.25	116.50	19,222
<b>Telephone line—copper.....</b>	11.51	23.02	2,417
Total.....	69.76	139.52	21,639

### TOTAL MILEAGE AND WEIGHT OF CABLE

Cable	Miles of cable	Weight in pounds
Aluminum.....	456.57	860,969
Aluminum, steel reinforced.....	7.38	20,575
Copper.....	31.50	46,607
Total.....	495.45	928,151

ONTARIO POWER COMPANY LINES—Continued  
TOTAL MILEAGE AND WEIGHT OF TELEPHONE WIRE

Wire	Miles of wire	Weight in pounds
Galvanized iron .....	116.50	19,222
Copper .....	23.02	2,417
Total .....	139.52	21,639

MILEAGE OF LINES TABULATED ACCORDING TO VOLTAGE AND NUMBER OF CIRCUITS

Voltage	Single-circuit lines total miles	Double-circuit lines total miles	Combined single and double-circuit lines total miles
60,000 .....	12.02	.....	12.02
30,000 .....	.....	21.74	21.74
12,000 .....	4.21	52.72	56.93
Total .....	16.23	74.46	90.69

SIZE, LENGTH AND WEIGHT OF CONDUCTORS IN TRANSMISSION LINES

Size and material	Miles of conductor	Weight in pounds	Miles of single-circuit lines	Miles of double circuit-lines	Miles of single and double-circuit lines
173,000 c.m. alum. ....	53.13	47,498	1.41	8.15	9.56
211,950 " " .....	39.00	40,950	.....	6.50	6.50
345,000 " " .....	244.50	418,095	.....	40.75	40.75
500,000 " " .....	83.88	208,022	.....	13.98	13.98
820,000 " " .....	36.06	146,404	12.02	.....	12.02
336,400 c.m. s.-r. alum..	7.38	20,575	.....	1.23	1.23
1/0 B.& S.G. copper.....	2.16	3,715	.....	0.36	0.36
2/0 " " " .....	14.40	31,234	.....	2.40	2.40
No. 3 " " " .....	12.24	10,502	2.80	0.64	3.44
No. 6 " " " .....	2.70	1,156	.....	0.45	0.45
Total .....	495.45	928,151	16.23	74.46	90.69

SIZE, LENGTH AND WEIGHT OF TELEPHONE LINES

Size and material	Wire miles	Weight in pounds	Single-circuit lines total miles
No. 12 B.W.G. galvanized iron wire .....	116.50	19,222	58.25
No. 12 B. & S.G. copper wire .....	23.02	2,417	11.51
Total .....	139.52	21,639	69.76

## TORONTO POWER COMPANY

### TABULATION OF TRANSMISSION AND TELEPHONE LINES

Total mileage of Toronto Power Company's lines (includes 58 miles steel-tower line, no cables).....	246.73
Total number of poles erected.....	4,034
Total number of steel towers erected.....	2,067
Total mileage of single-circuit lines.....	80.48
Total mileage of double-circuit lines.....	111.17

### SIZE, MATERIAL, LENGTH AND WEIGHT OF CONDUCTOR

Size and material	Span miles	Wire miles	Weight in pounds
<b>Copper conductor:</b>			
190,000 c.m.....	220.53	661.59	2,095,727
133,000 c.m.....	22.31	66.93	145,238
115,000 c.m.....	35.35	106.05	198,207
No. 2.....	14.63	43.89	47,489
Total.....	292.82	778.46	2,486,661
<b>Telephone line—copper.....</b>	183.36	366.72	60,875
<b>Telephone line—copper-clad steel.....</b>	4.92	9.84	3,862
Total.....	188.28	376.56	64,737

### TOTAL MILEAGE AND WEIGHT OF TRANSMISSION CABLE

	Miles of cable	Weight in pounds
	878.46	2,486,661
Total.....	878.46	2,486,661

### TOTAL MILEAGE AND WEIGHT OF TELEPHONE WIRE

	Miles of wire	Weight in pounds
	376.56	64,737
Total.....	376.56	64,737



### TORONTO POWER COMPANY LINES—Continued

#### MILEAGE OF LINES TABULATED ACCORDING TO VOLTAGE AND NUMBER OF CIRCUITS

Voltage	Single circuit total miles	Double circuit total miles	Combined single and double circuit total miles
90,000 volts.....	.....	84.0	84.0
60,000 volts.....	12.23	9.0	21.23
12,000 volts.....	68.25	18.17	86.42
Total.....	80.48	111.17	191.65

#### SIZE, LENGTH AND WEIGHT OF CONDUCTORS IN TRANSMISSION LINES

Size and material	Miles of conductor	Weight in pounds	Miles of single circuit lines	Miles of double circuit lines	Miles of single and double cir- cuit lines
190,000 c.m. copper.....	661.59	2,095,727	22.29	104.12	126.41
115,000 c.m. copper.....	106.05	198,207	21.25	7.05	28.30
133,000 c.m. copper.....	66.93	145,238	22.31	.....	22.31
No. 2 copper.....	43.89	47,489	14.63	.....	14.63
Total.....	878.46	2,486,661	80.48	111.17	191.65

#### SIZE, LENGTH AND WEIGHT OF TELEPHONE LINES

Size and material	Wire miles	Weight in pounds	Single circuit total
No. 10 B. & S.G. copper.....	366.72	60,875	183.36
No. 14 copper-clad steel.....	3.84	235	1.92
No. 4 copper-clad steel.....	6.00	3,627	3.00
Total.....	376.56	64,737	188.28

## DESCRIPTION

## NIAGARA SYSTEM—110,000-VOLT,

New section number	Old section number	From	To	Aver. span feet	Miles	No. of towers
N1 x 54	A	Niagara trans. sta.	Altenburg jct. tower No. 59	550	6.07	54
N54 x 2	A	Altenburg jct. tower No. 59	Dundas trans. sta.	550	45.36	516
N1 x 2	AA	Niagara trans. sta.	" " "	630	50.00	451
N2 x 13	Pt. B1 & B2	Dundas " "	Cooksville " "	550	27.20	295
N13 x 16	Pt. B1 & B3	Cooksville " "	York " "	550	6.73	74
N16 x 3	Pt. B1 & B4	York " "	Toronto " "	550	5.10	62
N2 x 52	BB	Dundas " "	Nelson jct. tower No. 64	630	6.75	64
N52 x 13	BB	Nelson jct. tower No. 64	Cooksville trans. sta.	630	20.47	177
N13 x 16	BB	Cooksville trans. sta.	York " "	630	6.72	59
N2 x 12	C	Dundas " "	Brant " "	550	22.65	251
N12 x 10	D	Brant " "	Woodstock " "	550	21.83	231
N10 x 4	E	Woodstock " "	London " "	550	25.45	278
N2 x 5	F	Dundas " "	Guelph " "	550	25.26	268
N5 x 6	P-1	Guelph " "	Preston " "	550	10.73	115
N6 x 7	P-2	Preston " "	Kitchener " "	550	8.14	91
N7 x 8	H	Kitchener " "	Stratford " "	550	25.09	267
N8 x 9	I	Stratford " "	St. Marys " "	550	13.53	147†
N9 x 4	J	St. Marys " "	London " "	550	23.59	250†
N4 x 11	K	London " "	St. Thomas " "	550	13.38	140
N11 x 14	L	St. Thomas " "	Kent " "	660	58.04	486
N14 x 15	M	Kent " "	Essex " "	660	44.77	374
N21 x 50	..	Queenston " "	Structure at forebay	6 spans	0.04	7
N50 x 51	..	Structure at forebay	Niagara trans. sta. . . .	550	5.48	58
N50 x 53	..	Structure at forebay	Saltfleet jct. tower No. 241	880	37.69	255
N53 x 17	..	Saltfleet jct. tower No. 241	Hamilton trans. sta.	750	1.92	14
N50 x 54	..	Structure at forebay	Altenburg jct. tower No. 59	880	9.16	58
			Total mileage. . . . .	.....	521.15	

## Lines under

N53 x 52	..	Saltfleet jct. tower No. 240	Nelson jct. tower No. 64	880	8.46	51
N16 x 66	..	York trans. sta.	Islington jct. tower, No. 15	550	1.31	15
N66 x 82	..	Islington jct. tower No. 15	Wiltshire ave. jct. tower No. 74	450	4.50	59
N82 x 32	..	Wiltshire ave. jct. tower No. 74	Wiltshire ave. trans. sta.	300	0.13	3
N82 x 31	..	Wiltshire ave. jct. tower No. 74	Bridgeman ave. trans. sta.	300	2.50	49

\*NOTE.—Section "A" has 50 miles of 312,000 c.m. steel-reinforced aluminum conductors, and Section "N16 x 3" has 1.30 miles of 312,000 c.m. steel-reinforced aluminum Section "N7 x 8" has 23.90 miles of 312,000 c.m. steel-reinforced aluminum †Sections N7 x 9 and "N9 x 4" single-circuit towers only. All other sections

\*\*Sections "N2 x 52," "N52 x 13," and "N13 x 16" first circuit placed in operation NOTE.—For inter-connected lines at 110,000-volts, see Toronto Power Company's lines, N66=B66.

OF LINES

25-CYCLE, STEEL-TOWER LINES

No. of circuits	Size and material of power cable	Size and material of ground cable	Date placed in operation	Size and material of original conductors	Date of last stringing
2	312,000 c.m. s-r. alum. c.	5/16" steel	Oct., 1910	4/0 aluminum	Dec., 1918
2	312,000 c.m. " *	" "	Oct., 1910	4/0 "	Dec., 1918
2	211,600 c.m. copper	" "	Feb., 1915	211,600 c.m. copper	.....
2	312,000 c.m. s-r. alum. c.	" "	Mar., 1911	3/0 aluminum	Oct., 1917
2	312,000 c.m. " "	" "	Mar., 1911	3/0 "	Oct., 1917
2	312,000 c.m. " *	" "	Mar., 1911	3/0 "	Oct., 1917
2	500,000 c.m. " "	" "	** .....	500,000c.m. s-r. alum c.	.....
2	500,000 c.m. " "	" "	** .....	500,000 c.m. s-r. alum c.	.....
2	500,000 c.m. " "	" "	** .....	500,000 c.m. s-r. alum c.	.....
2	336,400 c.m. " "	" "	Nov., 1910	3/0 "	Oct., 1914
2	336,400 c.m. " "	" "	Nov., 1910	3/0 "	Oct., 1914
2	336,400 c.m. " "	" "	Dec., 1910	3/0 "	Oct., 1914
2	336,400 c.m. " "	" "	Oct., 1910	3/0 "	June, 1915
2	266,800 c.m. " "	" "	Oct., 1910	3/0 "	June, 1915
2	266,800 c.m. " "	" "	Oct., 1910	3/0 "	June, 1915
1	312,000 c.m. " *	" "	Dec., 1910	3/0 "	Dec., 1919
1	266,800 c.m. " "	" "	Dec., 1910	3/0 "	June 1915
1	266,800 c.m. " "	Removed	Dec., 1910	3/0 "	June, 1915
2	266,800 c.m. " "	5/16" steel	Dec., 1910	3/0 "	Oct., 1913
2	167,800 c.m. copper	" "	Aug., 1914	167,800 c.m. copper	.....
2	167,800 c.m. " "	" "	Aug., 1914	167,800 c.m. copper	.....
6	605,000 c.m. s-r. alum. c.	none	Jan., 1922	605,000 c.m. s-r. alum. c.	.....
2	500,000 c.m. " "	7/16" steel	Jan., 1922	500,000 c.m. s-r. alum. c.	.....
2	605,000 c.m. " "	5/16" "	Oct., 1922	605,000 c.m. s-r. alum. c.	.....
2	605,000 c.m. " "	5/16" "	Oct., 1922	605,000 c.m. s-r. alum. c.	.....
2	605,000 c.m. " "	5/16" "	Sept., 1923	605,000 c.m. s-r. alum. c.	.....

construction

2	605,000 c.m. s-r. alum. c.	5/16" steel	.....	.....	.....
2	500,000 c.m. " "	" "	.....	.....	.....
2	190,000 c.m. copper	none	.....	.....	.....
2	190,000 c.m. " "	" "	.....	.....	.....
2	190,000 c.m. " "	" "	.....	.....	.....

1.43 miles of 211,600 c.m. copper.  
conductor and 3.80 miles of 211,600 c.m. copper from Humber River to Toronto substation.  
conductor and 1.19 miles of 266,800 c.m. steel-reinforced aluminum conductor.  
double-circuit towers.  
July 9, 1922. Second circuit placed in operation, Oct. 1923.  
symbol "B."



DESCRIPTION  
NIAGARA SYSTEM—HIGH-

New section number	Old section number	From	To	Avg. height of pole in feet	Avg. span in feet	Miles
N1 x 2	A	Niagara trans. sta.	Dundas trans. sta.	30	132	54.16
N1 x 2	AA	" " "	" " "	30	132	50.00
N 2 x 13 } N13 x 16 } N16 x 3 }	B	Dundas " "	Toronto city limits	30	132	35.87
N2 x 12	C	" " "	Brant " "	30	132	22.90
N12 x 10	D	Brant " "	Woodstock " "	30	132	21.53
N10 x 4	E	Woodstock " "	London " "	30	132	26.03
N2 x 5	F	Dundas " "	Guelph " "	30	132	26.12
N5 x 6	P-1	Guelph " "	Preston " "	30	132	12.78
N6 x 7	P-2	Preston " "	Kitchener " "	30	132	9.09
N7 x 8	H	Kitchener " "	Stratford " "	30	132	28.75
N8 x 9	I	Stratford " "	St. Marys " "	30	132	15.28
N9 x 4	J	St. Marys " "	London " "	30	132	27.81
N4 x 11	K	London " "	St. Thomas " "	30	132	16.09
N11 x 14	L	St. Thomas " "	Kent " "	30	132	58.04
N14 x 15	M	Kent " "	Essex " "	30	132	44.77
N20 x 1	....	Queenston gen. sta.	Niagara " "	25	150	6.16
N20 x 25	....	" " "	Ont. Power Co. D.S.	25	150	6.05
N17 x 26	....	Hamilton trans. sta.	Connect system "B"	25	150	1.37
K1 x 99	....	Administration bld.	Jct. pole No. 142 (St. Clair ave.)	..	...	2.46
K1 x 99	....	Jct. No. 142 (St. Clair ave.)	Chief Engineer's house	..	...	0.57
K1 x 99	....	Jct. pole No. 142 (St. Clair ave.)	Oper. Engineer's house	..	...	1.42
K1 x 99	....	Administration bld.	Strachan ave.	..	...	2.50
K1 x 99	....	" "	Administration annex	..	...	0.34
K1 x 99	....	" "	Tap Tor. Power Co., (College st.)	..	...	0.12
			Total mileage....	.....	.....	470.21

NOTE.—Old relay of No. 12 B. & S.G. copper not in use.

\* N20 x 25 carried on 204 O.P.Co. poles and 15 H.E.P.C. poles—Total of 219 poles.  
\*\* 4 circuits and 2 phantom.

## OF LINES

## TENSION TELEPHONE LINES

No. of poles	No. of circuits	Number, size and material of conductors	Date placed in operation	Size of original wire	Altered wire	Remarks
2,204	4	{ 2-No. 9 B. & S.G. copper	1910			
1,405	1	{ 2-No. 10 " "				
		No. 9 " "	1915			
1,519	4 **	{ 2-No. 9 " "	1910			
		{ 2-No. 8 B. & S.G. c.c. steel				
957	2	{ 1-No. 9 B. & S.G. copper	1910			
888	2	{ 1-No. 10 " "				
		{ 1-No. 9 " "	1910			
1,074	2	{ 1-No. 10 " "	1910			
		{ 1-No. 11 " "				
1,093	1	1-No. 10 " "	1910			
535	1	1-No. 10 " "	1910			
400	1	1-No. 10 " "	1910			
1,164	1	1-No. 10 " "	1910			
634	1	1-No. 10 " "	1910			
1,204	2	{ 1-No. 10 " "	1910			
		{ 1-No. 11 " "				
696	2	{ 1-No. 10 " "	1910			
		{ 1-No. 12 " "				
2,370	2	No. 9 " "	1914			
1,829	2	No. 9 " "	1914			
225	2	No. 9 B. & S.G. h.d. copper	1921			
219*	1	No. 9 " " "	1922			
56	4	No. 8 B. & S.G. c.c. steel	1923			
142	1	No. 12 B.W.G. w.p. iron	1919			
30	1	No. 12 " " "	1919			
74	1	No. 12 " " "	1919			
....	25 prs.	No. 19 Paper insul. lead covered cop.	1915			
....	50 prs.	No. 22 " " " " "	1923			
....	10 prs.	No. 19 " " " " "	1923			

One  
circuit  
removed  
1922

**DESCRIPTION**  
**NIAGARA SYSTEM—**

New section number	Old section number	From	To	Avg. height of poles in feet	Avg. span in feet	Miles	No. of poles	Volt-age
<b>Lines terminating</b>								
N. 161 x 1	L.T. 75 {N.C.R 136-1	Jct. Tower No. 308 N161	Welland mun. sta....	48	250	0.53	10*	46,000
114 x 2	136-1	St. Catharines mun. sta.	Pt. Dalhousie mun. sta	30	120	3.18	140	4,000
175 x 5	.....	Pole No. 56 N175.....	Stamford Tp. sta....	35	150	0.69	26	12,000
166 x 6	207	S.W. Pole No. 100 N166	Niagara-on-the-Lake..	30	125	7.83	334	12,000
169 x 9	156	Pole No. 79, N169.....	Niagara Falls mun. sta	50	125	0.69	32	12,000
161 x 10	74	Tower No. 308, N161..	Union Carbide Co....	48	250	1.93	49*	46,000
171 x 11	164	Tower No. 330, N171..	Dunnville mun. sta...	35	176	21.54	672	46,000
176 x 16	168	Pole No. 52, N176.....	Queenston Quarry....	35	120	0.41	18	12,000
177 x 17	170	Pole No. 72, N177.....	St. Davids mun. sta...	35	120	0.08	2	12,000
101 x 21	.....	Welland mun. sta.....	Welland County Rock Crusher.....	30	160	5.51	211	2,300
168 x 44	.....	Merritton mun. sta....	Lincoln dist. sta.....	.....	.....	.....	.....	.....
153 x 25	.....	Grimsby dist. sta.....	Growers Cold Stor. Co.	30	130	0.44	20	4,000
179 x 19	.....	O.P.C. Pt. Colborne D.S.	Internat. Nickel Co...	40	125	1.00	46	30,000

\*Towers

**Lines terminating**

25 x 160	.....	O.P.Co. dist. sta.....	Jct. Pole No. 18, N160 at Allen & Murray St.....	.....	.....	0.31	.....	12,000
170 x 61	74	Tower No. 118, N170..	Tower No. 308, N161..	48	250	8.59	190*	46,000
173 x 65	162	Pole No. 147, N173....	Sw. Pole No. 206, N165	35	100	1.13	59	12,000
177 x 66	171	Pole No. 72, N177.....	Sw. Pole No. 100, N166	35	120	0.55	26	12,000
169 x 67	162	Pole No. 88, N169.....	Pole No. 115, N167...	35	100	0.53	27	12,000
101 x 71	164-A	Welland tower No. 320	Tower No. 330, N171..	48	250	0.53	11	46,000
167 x 73	162	Pole No. 115, N167....	Pole No. 147, N173....	35	100	0.52	32	12,000
165 x 76	167	Sw. Pole No. 206, N165	Pole No. 52, N176....	35	120	1.40	52	12,000
176 x 77	169	Pole No. 52, N176.....	Pole No. 72, N177....	35	120	0.44	20	12,000
1 x 170	73	Niagara trans. sta....	Tower No. 118, N170..	48	250	5.01	118*	46,000
1 x 174	175	Niagara trans. sta....	Tower No. 118, N174..	.....	.....	5.25	.....	46,000
20 x 173	...	Queenston gen. sta....	Pole No. 146, N173...	35	132	3.00	127	12,000
160 x 75	162	Jct. Pole No. 18, N160..	Pole No. 56, N175....	35	100	0.75	38	12,000
175 x 69	162	Pole No. 56, N175.....	Pole No. 79, N169....	35	100	0.77	36	12,000

**Lines terminating**

114 x 52	.....	St. Catharines mun. sta.	Beamsville dist. sta...	35	150	13.40	507	12,000
152 x 53	.....	Beamsville dist. sta....	Grimsby dist. sta....	35	150	6.58	103	12,000

Note: For inter-connected lines at 12,000 volts, see Ontario Power Co. system, Symbol "A"

\*Towers



## OF LINES

## NIAGARA DISTRICT—SYMBOL N1

No. of circuits	Size and material of power cable	Size and material of telephone wire	Size and material of ground cable	Make and style of power insulators	Date work began	Date placed in operation
at customers						
2	2/0 B.&S.G. copper	8 B.&S.G. c-c. steel	1/4" galv. steel	{ O.B. San. & Keokuk, C.P. 356	July 11, 1914	Oct. 17, 1914
1	1/0 B. & S.G. alum.	None	None	.....	Oct. 16, 1912	Nov. 17, 1912
1	2 B. & S.G.s-r. alum	9 B.W.G. galv. iron	None	O.B. 12546	May 10, 1921	July 3, 1921
1	6 B. & S.G. copper	None	None	.....	.....	.....
2	2/0 B.&S.G.s-r.alum	10 B.&S.G. c-c. steel	None	O.B. 12546	Nov. 14, 1922	Feb. 8, 1923
4	4/0 B.&S.G. copper	8 B.&S.G. c-c. steel	1/4" galv. steel	{ O.B. San. & Keokuk, C.P. 1725	Mar. 15, 1914	Aug. 20, 1914
1	5/16" galv. steel	9 B.W.G. galv. iron	1/4" galv. steel	J.D. Insul.	Aug. 17, 1917	Mar. 21, 1918
1	6 B. & S.G. copper	.....	Built by O.P.Co.	Vic. 407	.....	.....
1	6 " " "	.....	" " "	Vic. 407	.....	.....
1	2 B. & S.G.s-r. alum	.....	3 x 13 galv. steel	C.P. 105	July 17, 1921	Sept. 22, 1921
1	6 B.&S.G. h-d. cop.	None	6 B.&S.G.h-d.cop	C.P. 105	Oct. 15, 1922	Dec. 24, 1922
2	105,530 c.m.s-r.al.	10 B.&S.G. c-c. steel	None	C.P. 1162	Aug. , 1922	Sept. 20, 1922

## at junctions

2	2/0 B.&S.G. copper	None	None	.....	.....	.....
4	4/0 " "	8 B.&S.G.c-c. steel	1/4" galv. steel	{ O.B. San. & Keokuk, C.P. 106	Mar. 15, 1914	Aug. 20, 1914
1	4 " "	12 B.W.G.galv.iron	Built by O.P.Co.	Vic. 407	.....	.....
1	6 " "	None	" " "	.....	.....	.....
2	173,000 c.m. alum.	12 B.W.G. galv.iron	" " "	.....	.....	.....
2	2/0 B.&S.G. copper	8 B.&S.G. c-c. steel	1/4" galv. steel...	{ O.B. San. & Keokuk, C.P. 1725	July 11, 1914	Oct. 17, 1914
2	173,000 c.m. alum.	12 B.W.G. galv.iron	Built by O.P.Co.	Vic. 407	.....	.....
1	6 B.&S.G. copper..	None	" " "	Vic. 407	.....	.....
1	6 " "	None	" " "	Vic. 407	.....	.....
4	4/0 " "	8 B.&S.G. c-c. steel	1/4" galv. steel	{ O.B. San. & Keokuk, C.P. 356	Mar. 15, 1914	Aug. 20, 1914
2	7/16" galv. steel...	None	None	C.P. 1725	Nov. 13, 1917	.....
1	1 B.&S.G. copper	None	None	C.P. 793	.....	May 30, 1922
2	345,000 c.m. alum..	12 B.W.G.galv.iron	None	Built by O.P. Co.	.....	.....
2	345,000 " "	12 " " "	None	Built by O.P. Co.	.....	.....

## at distributing stations

1	2/0 B.&S.G. s-r.al.	None	None	Thom. 2111	Oct. 12, 1922	Jan. 8, 1923
1	2/0 B.&S.G.s-r.al..	None	None	Thom. 2111	Oct. 12, 1922	Feb. 10, 1923

DESCRIPTION  
NIAGARA SYSTEM—

New section number	Old section number	From	To	Avg. height of poles in feet	Avg. span in feet	Miles	No. of poles	Volt-age
Lines terminating								
N. 2 x 201	L.T. 1	Dundas trans. sta.....	Hamilton mun. sta....	50½	206	2.85	73	13,200
264 x 2	118	Pole No. 82, N264.....	Dundas mun. sta.....	55	120	0.12	7	13,200
235 x 6	40&40A	Dom. Sewer Pipe Co...	Waterdown dist. sta...	35	120	3.43	72	2,200
237 x 7	61	Caledonia dist. sta.....	Caledonia.....	.....	.....	0.30	.....	2,200
237 x 8	47A	Caledonia dist. sta.....	Alabastine Co.....	.....	.....	0.17	.....	2,200
270 x 10	50	Pole No. 941, N270....	Ont. Gypsum Co.....	40	120	5.19	229	13,200
202 x 11	209	Dundas mun. sta.....	Copetown.....	35	132	5.98	5	2,200

Lines terminating								
271 x 34	129	Pole No. 328, N271....	Lynden dist. sta.....	35	132	4.53	185	13,200
266 x 35	38	Pole No. 260, N266....	Dom. Sew.Pipe Co.sta.	40	120	1.93	90	13,200
2 x 237	47	Dundas tran. sta.....	Caledonia dist. sta....	40	120	14.97	669	13,200
270 x 39	49	Pole No. 941, N270....	Hagersville dist. sta...	40	120	3.85	173	13,200

Lines terminating								
2 x 263	43	Dundas trans. sta.....	Pole No. 69, N263....	40	120	1.21	65	13,200
263 x 64	118	Pole No. 69, N263 ....	Pole No. 82, N264....	55	120	0.25	13	13,200
2 x 266	38	Dundas H-T sta.....	Pole No. 260, N266...	40	120	5.44	260	13,200
237 x 70	48	Caledonia dist. sta.....	Pole No. 941, N270...	40	120	6.10	267	13,200
264 x 71	129	Pole No. 82, N264 ....	Pole No. 328, N271...	35	132	5.78	245	13,200

NIAGARA SYSTEM—

New section number	Old section number	From	To	Avg. height of poles in feet	Avg. span in feet	Miles	No. of poles	Volt-age
N.	L.T.							
301 x 64	N.C.R. 607-3	Toronto city limits....	York twp. limits.....	.....	.....	0.22	12	.....
364 x 68	N.C.R. 607-1	York twp. limits.....	Unionville jct., N368 ..	.....	.....	.....	.....	.....
368 x 67	N.C.R. 607-1	Unionville jct., N368 ..	Markham jct., N367..	.....	.....	.....	.....	.....
367 x 7	215	Markham jct., N367 ..	Markham. ....	40	125	5.58	235	4,000
26 x 310	.....	Tor. Power Co. (Sedore sta.) .....	Sutton.....	.....	.....	2.50	.....	4,000
372 x 42	.....	Pole No. ...., N372....	Mount Joy dist. sta...	35	175	8.83	266	12,000
342 x 11	.....	Mount Joy dist. sta....	Stouffville.....	30	160	6.40	139	4,000

Note: Other connected low-tension lines in this district are owned by the municipality.

OF LINES

DUNDAS DISTRICT—SYMBOL N2

No. of circuits	Size and material of power cable	Size and material of telephone wire	Size and material of ground cable	Make and style of power insulators	Date work began	Date placed in operation
at customers						
4	4/0 B.&S.G.h.d. copper	10 B.&S.G.c-c. steel 8 B.W.G. iron wire	1/4" galv. steel	C.P. 133	April 7, 1915	Oct. 4, 1915
2	4 B. & S.G. copper	10 B. & S.G. copper	1/4" galv. steel	C.P. 136	Feb. 25, 1915	Mar. 15, 1915
1	2 B. & S.G. alum.	8 B.&S.G. c-c. steel	1/4" galv. steel	.....	Sept. 30, 1911	April 6, 1912
1	4 B. & S.G. d.b. w.p. copper	None	None	.....	Nov. 20, 1912	Nov. 30, 1912
1	2/0 B.&S.G. copper	None	None	.....	Sept. 5, 1912	Sept. 20, 1912
1	3/0 B. & S.G. alum.	8 B.&S.G.c-c. steel	1/4" galv. steel	Thom. 2041	June 15, 1912	Sept. 20, 1912
1	6 B. & S.G. h.d. copper	9 B.W.G. galv. iron	None	C.P. 105	Sept. 10, 1919	Oct. 17, 1919

at distributing stations

1	2B.&S.G.s-r.alum.	9 B.W.G. galv. iron	1/4" galv. steel	O.B. 12547	July 24, 1915	Oct. 22, 1915
1	2 B. & S.G. alum.	8 B.&S.G. c-c. steel	1/4" galv. steel	Thom 2041	July 21, 1911	April 6, 1912
1	3/0 B. & S.G. alum.	8 B.&S.G. c-c. steel	1/4" galv. steel	Thom 2041	May 10, 1912	Sept. 20, 1912
1	2 B. & S.G. alum.	10 B.&S.G.c-c. steel	1/4" galv. steel	Thom 2041	Feb. 28, 1913	Aug. 15, 1913

at junctions

2	4 B. & S.G. copper	10 B.&S.G.c-c. steel	1/4" galv. steel	Thom 2041	Dec. 1, 1911	Dec. 21, 1911
2	4 B. & S.G. copper	10 B. & S.G. copper	1/4" galv. steel	C.P. 136	Feb. 25, 1915	Mar. 15, 1915
1	2 B. & S.G. alum.	8 B.&S.G. c-c. steel	1/4" galv. steel	Thom 2041	July 21, 1911	April 6, 1912
1	3/0 B. & S.G. alum.	8 B.&S.G. c-c. steel	1/4" galv. steel	Thom 2041	June 22, 1912	Sept. 20, 1912
1	2 B.&S.G.s-r.alum.	9 B.W.G. galv. iron	1/4" galv. steel	O.B. 12547	July 24, 1915	Oct. 22, 1915

TORONTO DISTRICT—SYMBOL N3

No. of circuits	Size and material of power cable	Size and material of telephone wire	Size and material of ground cable	Make and style of power insulators	Date work began	Date placed in operation
1	6 B.&S.G. bare copper	.....	6 B.W.G. galv. iron	.....	.....	.....
1	2 B.&S.G.s-r. alum.	.....	1/4" galv. steel	C.P. 105	Dec. 27, 1919	April 1, 1920
1	4 B.&S.G.h-d.cop.	None	6 B.&S.G.h-d.cop	C.P. 105	July 16, 1923	July 21, 1923
1	2 B.&S.G. s-r. alum	None	None	Thom. 2111	Aug. 3, 1923	Sept. 24, 1923
1	2 B.&S.G. s-r. alum	None	5/16" galv. steel	C.P. 105	Aug. 20, 1923	Sept. 25, 1923



DESCRIPTION  
NIAGARA SYSTEM—

New section number	Old section number	From	To	Avg. height of poles in feet	Avg. span in feet	Miles	No of poles	Volt- age
<b>Lines terminating</b>								
N. 432 x 3	L.T. 116	Delaware dist. sta. ....	Lambeth. ....			6.59	.....	4,000
432 x 4	117	Delaware dist. sta. ....	Mt. Brydges. ....			3.99	.....	4,000
464 x 5	98	Pole No. 944, N464. ....	Strathroy mun. sta. ....	40	120	9.27	425	13,200
467 x 6	77	Pole No. 388, N467. ....	Thorndale. ....	35	132	4.27	179	13,200
467 x 7	93	Pole No. 388, N467. ....	Deller Bros. ....	25	132	0.89	42	2,200
439 x 8	78	Dorchester dist. sta. ....	Thamesford. ....	35	132	6.80	280	13,200
439 x 20	177	Dorchester dist. sta. ....	Dorchester. ....	30	160	3.00	91	4,000
440 x 11	134	Lucan dist. sta. ....	Granton. ....	30	132	6.09	247	4,000
440 x 12	130	Lucan dist. sta. ....	Pole No. 146, N412. ....	30	132	3.57	146	4,000
474 x 14	151	Pole No. 51, N474. ....	Hensall. ....	30	132	5.12	205	4,000
475 x 15	161	Sarepta met. sta. 316, N475	Zurich. ....	30	132	5.17	211	4,000
475 x 16	160	Sarepta met. sta. 316, N475	Dashwood. ....	30	132	1.35	56	4,000
442 x 18	211	Ailsa Craig dist. sta. ....	Parkhill. ....	30	160	9.03	325	4,000

**Lines terminating**

462 x 32	119	Pole No. 760, N462. ....	Delaware dist. sta. ....	55	120	0.09	5	13,200
469 x 39	76	Pole No. 38, N469. ....	Dorchester dist. sta. ....	35	132	5.28	219	13,200
472 x 42	210	Pole No. 757, N472. ....	Ailsa Craig dist. sta. ....	30	132	9.92	402	13,200
440 x 43	136	Lucan dist. sta. ....	Exeter dist. sta. ....	35	132	13.24	558	13,200
472 x 40	99	Pole No. 757, N472. ....	Lucan dist. sta. ....	35 & 40	132	3.00	123	13,200

**Lines terminating**

463 x 62	96	Pole No. 462, N463. ....	Pole No. 760, N462. ....	40	120	6.59	298	13,200
4 x 463	95	London trans. sta. ....	Pole No. 462, N463. ....	40	120	10.13	457	13,200
462 x 64	97	Pole No. 760, N462. ....	Pole No. 944, N464. ....	40	120	3.99	184	13,200
439 x 67	77	Dorchester dist. sta. ....	Pole No. 388, N467. ....	35	132	3.04	132	13,200
4 x 469	18	London trans. sta. ....	Pole No. 38, N469. ....	40	120	0.81	38	13,200
469 x 70	19	Pole No. 38, N469. ....	Pole No. 99, N470. ....	45	120	1.38	61	13,200
470 x 72	99	Pole No. 99, N470. ....	Pole No. 757, N472. ....	35 & 40	132	16.18	659	13,200
443 x 74	151	Exeter dist. sta. ....	Pole No. 51, N474. ....	30	132	1.07	.....	4,000
474 x 75	159	Pole No. 51, N474. ....	Pole No. 316, N475. ....	30	132	7.58	265	4,000

NOTE.—N4 x 469 L.T. 18—Arms, pins, poles and hardware owned by H.E.P.C., 1 circuit of 3/10  
 N469 x 70 L.T. 19—1-circuit of 2 B. & S.G. alum, with insulators owned by London local  
 N469 x 1 L.T. 20—Jct. pole No. 38 L.T. 18 to Jct. pole No. 93 L.T. 20, 1-circuit of 3/0  
 N 4 x 401 L.T. 21—2-circuits of 3/0 B. & S.G. alum, together with insulators, cross arms,  
 N 469 x 1 L.T. 22—1-circuit of 3/0 B. & S.G. alum, together with insulators, cross arms,  
 N 470 x 17—1-circuit of 2 B. & S.G. alum, together with insulators, cross arms, poles,  
 Other connected low-tension lines in this district are owned by the municipality.

## OF LINES

## LONDON DISTRICT—SYMBOL N4

No. of circuits	Size and material of power cable	Size and material of telephone wire	Size and material of ground cable	Make and style of power insulators	Date work began	Date placed in operation
at customers						
1	6 B. & S.G. m.h-d. copper	None	None	C.P. 105	Jan. 25, 1915	Mar. 15, 1915
1	6 B. & S.G. m.h-d. copper	None	1/4" galv. steel.	O.B. 9403	Jan. 7, 1915	Mar. 1, 1915
1	3/0 B. & S.G. alum.	10 B. & S.G. c-c. steel	1/4" galv. steel	C.P. 136	Sept. 14, 1914	Nov. 30, 1914
1	2 B. & S.G. alum. . .	None	1/4" galv. steel	Thom 2041	Oct. 10, 1913	Feb. 6, 1914
1	6 B. & S.G. copper	None	8 B. & S.G. c-c. steel as neutral	Parker 2822	Mar. 19, 1914	Mar. 19, 1915
1	2 B. & S.G. alum.	None	1/4" galv. steel	Thom. 2041	Oct. 13, 1913	Jan. 27, 1914
1	6 B. & S.G. copper	None	1/4" galv. steel	.....	.....	.....
1	4 B. & S.G. copper	None	1/4" galv. steel	.....	.....	.....
1	6 B. & S.G. m.h-d. copper	None	6 B.W.G. galv. iron	C.P. 259	April 6, 1916	June 29, 1916
1	2 B. & S.G. s-r. alum.	None	1/4" galv. steel	O.B. 12546	July 28, 1915	Dec. 15, 1915
1	6 B. & S.G. m.h-d. copper	None	6 B.W.G. galv. iron	O.B. 9403	Sept. 11, 1916	Dec. 21, 1916
1	2 B. & S.G. s-r. alum	None	1/4" galv. steel	C.P. 259	Mar. 29, 1917	Aug. 23, 1917
1	6 B. & S.G. m.h-d. copper	None	1/4" galv. steel	C.P. 259	Mar. 29, 1917	Aug. 23, 1917
1	2 B. & S.G. s-r. alum	None	9/32" galv. steel	C.P. 105	Nov. 17, 1919	May 14, 1920

## at distributing stations

1	2 B. & S.G. copper	10 B. & S.G. c-c. steel	1/4" galv. steel	O.B. 9413	Jan. 27, 1915	Feb. 1, 1915
1	2 B. & S.G. alum.	10 B.W.G. galv. iron	1/4" galv. steel	Thom 2041	Sept. 18, 1913	Jan. 27, 1914
1	2 B. & S.G. s-r. alum.	6 B. & S.G. s-r. alum.	9/32" galv. steel	C.P. 793	Nov. 12, 1919	May 2, 1920
1	3/0 B. & S.G. alum.	9 B.W.G. galv. iron	1/4" galv. steel	O.B. 12546	Nov. 26, 1915	May 4, 1916
2	2 B. & S.G. s-r. alum.	10 B.W.G. galv. iron	1/4" galv. steel	C.P. 136	Oct. 23, 1914	Jan. 21, 1915

## at junctions

1	3/0 B. & S.G. alum.	10 B. & S.G. c-c. steel	1/4" galv. steel	C.P. 136	Oct. 15, 1914	Nov. 30, 1914
1	3/0 B. & S.G. alum.	10 B. & S.G. c-c. steel	1/4" galv. steel	C.P. 136	Sept. 1, 1914	Nov. 30, 1914
1	3/0 B. & S.G. alum.	10 B. & S.G. c-c. steel	1/4" galv. steel	C.P. 136	Sept. 29, 1914	Nov. 30, 1914
1	2 B. & S.G. alum.	None	1/4" galv. steel	Thom 2041	Oct. 10, 1913	Feb. 6, 1914
3	2 s-r. alum.	10 B. & S.G. c-c. steel	1/4" galv. steel	Thom. 2041	Oct. 26, 1910	Jan. 10, 1911
2	2 B. & S.G. s-r. alum.	10 B. & S.G. c-c. steel	1/4" galv. steel	Thom 2041	Oct. 26, 1910	Jan. 19, 1911
2	2 B. & S.G. s-r. alum.	10 B.W.G. galv. iron	1/4" galv. steel	C.P. 136	Oct. 23, 1914	Jan. 21, 1915
2	6 B. & S.G. m.h-d. copper	None	6 B.W.G. galv. iron	O.B. 9403	Sept. 11, 1916	Dec. 21, 1916
1	2 B. & S.G. s-r. alum.	None	1/4" galv. steel	C.P. 259	Mar. 21, 1917	Aug. 25, 1917

B. & S. G. alum, with insulators from pole No. 5 to Jct. pole No. 38, owned by London local Hydro.

B. & S. G. alum., together with insulators, cross arms and poles owned by London local Hydro.

poles, etc., owned by London local Hydro.

poles, etc., owned by London local Hydro.

etc., owned by London local Hydro.

**DESCRIPTION**  
**NIAGARA SYSTEM—**

New section number	Old section number	From	To	Avg. height of poles in feet	Avg. span in feet	Miles	No. of poles	Voltage
<b>Lines terminating</b>								
N. 5 x 501	L.T. 32	Guelph struct. ....	Station Property Bdry.	40	120	0.08	5	13,200
562 x 2	31	Pole No. 70, N562. ....	Ont. Agric. College...	40	120	0.10	8	13,200
565 x 5	57A	Pole No. 155, N565. ....	Prison Farm. ....	40	120	0.08	3	13,200

<b>Lines terminating</b>								
564 x 33	86	Pole No. 776, N564. ....	Elora dist. sta. ....	40	120	1.18	57	13,200
564 x 34	87	Pole No. 776, N564. ....	Fergus dist. sta. ....	35	120	1.96	92	13,200
566 x 36	66	Pole No. 453, N566. ....	Rockwood dist. sta. ....	35	120	1.64	77	13,200
567 x 37	59	Pole No. 717, N567. ....	Acton dist. sta. ....	40	120	0.07	5	13,200
568 x 38	94	Pole No. 1005, N568. ....	Cheltenham dist. sta. ....	35	132	5.06	218	13,200
568 x 39	65	Pole No. 1005, N568. ....	Georgetown dist. sta. ....	40	120	2.68	121	13,200

<b>Lines terminating</b>								
5 x 562	31	Guelph trans. sta. ....	Pole No. 70, N562. ....	40	120	1.46	70	13,200
562 x 63	57	Pole No. 70, N562. ....	Pole No. 118, N563. ....	40	120	1.07	48	13,200
563 x 64	85	Pole No. 118, N563. ....	Pole No. 776, N564. ....	40	120	14.64	658	13,200
563 x 65	57	Pole No. 118, N563. ....	Pole No. 155, N565. ....	40	120	0.86	37	13,200
565 x 66	58	Pole No. 155, N565. ....	Pole No. 453, N566. ....	40	120	6.41	298	13,200
566 x 67	59	Pole No. 453, N566. ....	Pole No. 717, N567. ....	40	120	5.78	264	13,200
567 x 68	65	Pole No. 717, N567. ....	Pole No. 1005, N568. ....	40	120	6.37	288	13,200

NOTE.—Other connected low-tension lines in this district are owned by the municipality.

**NIAGARA SYSTEM—**

<b>Lines terminating</b>								
N. 6 x 601	L.T. 17 & 35	Preston trans. sta. ....	Preston corporation sta	35	120	0.14	11	13,200
601 x 2	35	Preston corp. sta. ....	G.P. & H. Rly. ....	40	120	0.12	6	13,200
664 x 3	16	Pole No. 99, N664. ....	Galt mun. sta. ....	40	120	3.75	175	13,200
664 x 4	15	Pole No. 99, N664. ....	Hespeler mun. sta. ....	40	120	2.09	99	13,200
604 x 5	.....	Hespeler mun. sta. ....	Christie Henderson Co	30	152	3.20	111	4,000

<b>Lines terminating</b>								
6 x 664	14	Preston trans. sta. ....	Pole No. 99, N664. ....	45	120	2.04	99	13,200

NOTE.—N664 x 3, L.T. 16, 63 poles from No. 212 to No. 274 inclusive were supplied and erected



## OF LINES

## GUELPH DISTRICT—SYMBOL N5

No. of circuits	Size and material of power cable	Size and material of telephone wire	Size and material of ground cable	Make and style of power insulators	Date work began	Date placed in operation
at customers						
3	3/0 B. & S.G. alum.	10 B.&S.G. c-c. steel	1/4" galv. steel	.....	Aug. 7, 1911	Sept. 4, 1911
1	1/0 B. & S.G. alum.	10 B.&S.G. c-c. steel	1/4" galv. steel	C.P. 793	July 21, 1911	Nov. 9, 1911
1	2 B. & S. G. s-r. alum.	8 B.&S.G. c-c. steel	1/4" galv. steel	Thom 2041	May 14, 1913	Sept. 4, 1913

## at distributing stations

1	3/0 B. & S.G. alum.	10 B.&S.G. c-c. steel	1/4" galv. steel	C.P. 136	Aug. 18, 1914	Oct. 22, 1914
1	3/0 B. & S.G. alum.	10 B.&S.G. c-c. steel	1/4" galv. steel	C.P. 136	Aug. 1, 1914	Oct. 22, 1914
1	2 B.&S.G. s-r. alum.	10 B.&S.G. c-c. steel	1/4" galv. steel	Thom 2041	May 6, 1913	Aug. 1, 1913
1	3/0 B.&S.G. s-r. alum.	8 B.&S.G. c-c. steel	1/4" galv. steel	Thom 2041	Aug. 19, 1912	Dec. 14, 1912
1	1/0 B.&S.G. alum.	10 B.&S.G. c-c. steel	1/4" galv. steel	.....	June 10, 1914	July 3, 1914
1	3/0 B.&S.G. alum.	10 B.&S.G. c-c. steel	1/4" galv. steel	Thom 2041	Mar. 11, 1913	Aug. 1, 1913

## at junctions

2	1-1/0 B.&S.G. alum.	10 B.&S.G. c-c. steel	1/4" galv. steel	C.P. 793	July 21, 1911	Nov. 9, 1911
	1-3/0 B.&S.G. alum.					
	1-3/0 B.&S.G. alum.					
2	1-3/0 B.&S.G. s-r. alum. ....	8 B.&S.G. c-c. steel	1/4" galv. steel	Thom 2041	Aug. 19, 1912	Dec. 14, 1912
1	3/0 B.&S.G. alum.	10 B.&S.G. c-c. steel	1/4" galv. steel	C.P. 136	June 3, 1914	Oct. 22, 1914
1	3/0 B.&S.G. s-r. alum.	8 B.&S.G. c-c. steel	1/4" galv. steel	Thom 2041	Aug. 19, 1912	Dec. 14, 1912
1	3/0 B.&S.G. s-r. alum.	8 B.&S.G. c-c. steel	1/4" galv. steel	Thom 2041	Aug. 19, 1912	Dec. 14, 1912
1	3/0 B.&S.G. s-r. alum.	8 B.&S.G. c-c. steel	1/4" galv. steel	Thom 2041	Aug. 19, 1912	Dec. 14, 1912
1	3/0 B.&S.G. alum.	10 B.&S.G. c-c. steel	1/4" galv. steel	Thom 2041	Mar. 11, 1913	Aug. 1, 1913

## PRESTON DISTRICT—SYMBOL N6

## at customers

2	1/0 B.&S.G. alum.	10 B.&S.G. c-c. steel	1/4" galv. steel	Thom 2041	Built by Pres	ton Corp.
	2 B.&S.G. copper					
	1/0 B.&S.G. alum.					
2	1/0 B.&S.G. s-r. alum.	10 B.&S.G. c-c. steel	1/4" galv. steel	Thom 2041	Mar. 13, 1911	Mar. 21, 1911
2	4/0 B.&S.G. alum.	10 B.&S.G. c-c. steel	1/4" galv. steel	Thom 2041	Oct. 8, 1910	Jan. 19, 1911
1	2 B.&S.G. alum.	10 B.&S.G. c-c. steel	1/4" galv. steel	Thom 2041	Oct. 8, 1910	Dec. 30, 1910
1	4 B.&S.G. bare cop.	None	1/4" galv. steel	C.P. 105	June 18, 1923	Oct. 1, 1923

## at junctions

3	1-2 B.&S.G. alum.	10 B.&S.G. c-c. steel	1/4" galv. steel	Thom 2041	Oct. 8, 1910	Jan. 19, 1911
	2-4/0 B.&S.G. alum.					

by Galt local Hydro.

DESCRIPTION  
NIAGARA SYSTEM—

New section number	Old section number	From	To	Avg. height of poles in feet	Avg. span in feet	Miles	No. of poles	Volt-age
<b>Lines terminating</b>								
N. 762 x 1	L.T. 6	Pole No. 10, N762....	Kitchener mun. sta. . .	45	120	0.76	34	13,200
762 x 2	5	Pole No. 9, N762.....	Waterloo mun. sta....	40	120	1.64	79	13,200
735 x 6	44	Baden dist. sta.....	Wellesley.....	30	150	7.92	252	4,000

<b>Lines terminating</b>								
702 x 33	71	Waterloo mun. sta....	St. Jacobs dist. sta....	40	120	6.28	299	13,200
733 x 34	71	St. Jacobs dist. sta....	Elmira dist. sta.....	40	120	4.62	218	13,200
765 x 35	7A	Pole No. 405, N765....	Baden dist. sta.....	40	120	0.11	7	13,200
766 x 37	7	Pole No. 463, N766....	New Hamburg dist. sta	40	120	1.89	92	13,200

<b>Lines terminating</b>								
7 x 762	4	Kitchener trans. sta....	Pole No. 9, N762.....	40	120	0.18	10	13,200
7 x 765	7	Kitchener trans. sta....	Pole No. 405, N765....	40	120	9.09	405	13,200
765 x 66	7	Pole No. 405, N765....	Pole No. 463, N766....	40	120	1.29	58	13,200

NOTE.—N762 x 1, L.T. 6, 35 poles, from No. 10 to No. 44 inclusive, were supplied and erected  
N7 x 762, L.T. 4, 5 poles, from No. 5 to No. 9 inclusive, were supplied and erected by  
N762 x 2, L.T. 5, 9 poles, from No. 80 to No. 88 inclusive, were supplied and erected  
Other connected low-tension lines in this district are owned by the municipality.

NIAGARA SYSTEM—

<b>Lines terminating</b>								
N. 863 x 3	L.T. 30	Pole No. 647, N863....	Mitchell mun. sta....	40	120	1.27	59	26,400
834 x 4	158	Dublin dist. sta.....	Dublin.....	30	150	1.26	47	4,000
865 x 5	29	Pole No. 1153, N865....	Seaforth mun. sta....	40	120	1.50	74	26,400
866 x 6	28	Pole No. 1550, N866....	Clinton mun. sta....	40	120	1.27	62	26,400
873 x 12	180	Pole No. 263, N873....	Moorefield.....	30	150	1.36	52	4,000
866 x 7	150	Pole No. 1550, N866....	Goderich mun. sta....	40	120	13.61	610	26,400
873 x 13	178	Pole No. 263, N873....	Drayton.....	30	150	3.54	123	4,000

<b>Lines terminating</b>								
8 x 832	125	Stratford trans. sta....	Tavistock dist. sta....	35	132	9.72	398	26,400
863 x 34	148	Pole No. 647, N863....	Dublin dist. sta.....	40	120	5.08	224	26,400
868 x 38	139	Pole No. 802, N868....	Milverton dist. sta....	35	132	0.96	38	26,400
869 x 39	141	Pole No. 1314, N869....	Listowel dist. sta....	35	132	2.77	120	26,400
871 x 40	142	Pole No. 1726, N871....	Palmerston dist. sta....	35	132	0.42	18	26,400
871 x 41	143	Pole No. 1726, N871....	Harriston dist. sta....	35	132	6.12	260	26,400

<b>Lines terminating</b>								
867 x 63	147	Pole No. 311, N867....	Pole No. 647, N863....	40	120	7.61	336	26,400
834 x 65	148	Dublin dist. sta.....	Pole No. 1153, N865....	40	120	6.28	282	26,400
865 x 66	149	Pole No. 1153, N865....	Pole No. 1550, N866....	40	120	8.84	397	26,400
8 x 867	146	Stratford trans. sta....	Pole No. 311, N867....	40	120	6.81	311	26,400
867 x 68	138	Pole No. 311, N867....	Pole No. 802, N868....	35	132	11.92	491	26,400
868 x 69	140	Pole No. 802, N868....	Pole No. 1314, N869....	35	132	12.83	512	26,400
869 x 70	142	Pole No. 1314, N869....	Pole No. 1657, N870....	35	132	8.40	343	26,400
872 x 71	142	Pole No. 1687, N872....	Pole No. 1726, N871....	35	132	0.84	39	26,400
870 x 72	142	Pole No. 1657, N870....	Pole No. 1687, N872....	35	132	0.78	30	26,400
840 x 73	178	Palmerston dist. sta....	Pole No. 263, N873....	30	150	7.09	237	4,000

NOTE.—From pole No. 1688 to Palmerston dist. sta., No. 9 B.W.G. galv.-iron tel. wire replaced  
Other connected low-tension lines in this district are owned by the municipality.

## OF LINES

## KITCHENER DISTRICT—SYMBOL N7

No. of circuits	Size and material of power cable	Size and material of telephone wire	Size and material of ground cable	Make and style of power insulators	Date work began	Date placed in operation
at customers						
2	1/0 B.&S.G. alum.	10 B.&S.G.c-c. steel	1/4" galv. steel	{ O.B. 12546 Thom 2041 O.B. 12546 Thom 2041 O.B. 9403	Aug. 25, 1910	Sept. 11, 1910
2	1/0 B.&S.G. alum.	10 B.&S.G.c-c. steel	1/4" galv. steel		Sept. 11, 1910	Nov. 25, 1910
1	4 B.&S.G. copper	None	6 B.W.G.galv.iron		May 16, 1916	Oct. 23, 1916

## at distributing stations

1	2 B.&S.G. alum.	10 B.&S.G.c-c. steel	1/4" galv. steel	Thom 2041	May 17, 1913	Oct. 25, 1913
1	2 B.&S.G. alum.	10 B.&S.G.c-c. steel	1/4" galv. steel	Thom 2041	May 17, 1913	Oct. 25, 1913
2	2 B.&S.G. alum.	10 B.&S.G.c-c. steel	1/4" galv. steel	Thom 2041	.....	May, 1912
2	2 B.&S.G. alum.	10 B.&S.G.c-c. steel	1/4" galv. steel	Thom 2041	Sept. 11, 1910	Feb. 3, 1911

## at junctions

4	1/0 B.&S.G. alum.	10 B.&S.G.c-c. steel	1/4" galv. steel	{ O.B. 12546 Thom 2041 Thom 2041 Thom 2041	Aug. 25, 1910	Sept. 11, 1910
2	2 B.&S.G. alum.	10 B.&S.G.c-c. steel	1/4" galv. steel		Sept. 11, 1910	Feb. 3, 1911
2	2 B.&S.G. alum.	10 B.&S.G.c-c. steel	1/4" galv. steel		Sept. 11, 1910	Feb. 3, 1911

by Kitchener local Hydro.

by Kitchener local Hydro.

by Waterloo local Hydro.

## STRATFORD DISTRICT—SYMBOL N8

## at customers

2	2 B.&S.G. alum.	10 B.&S.G.c-c. steel	1/4" galv. steel	Thom 2041	Mar. 24, 1911	Aug. 3, 1911
1	6 B.&S.G. m.h.d. copper.....	None	6 B.W.G.galv.iron	C.P. 259	June 8, 1917	Sept. 25, 1917
2	2 B.&S.G. alum.	10 B.&S.G.c-c. steel	1/4" galv. steel	Thom 2041	Mar. 25, 1911	Sept. 13, 1911
2	3/0 B.&S.G. alum.	10 B.&S.G.c-c. steel	1/4" galv. steel	C.P. 889	April 6, 1911	Aug. 4, 1911
1	6 B.&S.G. copper	None	6 B.W.G.galv.iron	C.P. 505	Dec. 1, 1917	Feb. 22, 1918
2	3/0 B.&S.G. alum.	10 B.&S.G.c-c. steel	1/4" galv. steel	C.P. 889	April 23, 1913	Dec. 23, 1914
1	4 B.&S.G. copper	None	6 B.W.G.galv.iron	C.P. 505	Oct. 24, 1917	Feb. 22, 1918

## at distributing stations

1	6 B.W.G. galv. iron	9 B.W.G. galv. iron	6 B.W.G.galv.iron	C.P. 133	Sept. 9, 1915	Oct. 26, 1916
2	3/0 B.&S.G. alum.	10 B.&S.G.c-c. steel	1/4" galv. steel	C.P. 133	April 23, 1913	Dec. 23, 1914
1	2 B.&S.G. s-r. alum.	9 B.W.G. galv. iron	1/4" galv. steel	O.B. 11622	Oct. 15, 1915	May 18, 1916
1	2 B.&S.G. s-r. alum.	9 B.W.G. galv. iron	1/4" galv. steel	O.B. 11622	Oct. 28, 1915	May 27, 1916
1	1/0 B.&S.G.s-r.alum	9 B.W.G. galv. iron	1/4" galv. steel	O.B. 11622	Oct. 14, 1915	June 6, 1916
1	1/0 B.&S.G.s-r.alum.	6 B.&S.G.s-r.alum.	1/4" galv. steel	O.B. 11622	Dec. 10, 1915	June 30, 1916

## at junctions

2	3/0 B.&S.G. alum.	10 B.&S.G.c-c. steel	1/4" galv. steel	C.P. 133	April 23, 1913	Dec. 23, 1914
2	3/0 B.&S.G. alum.	10 B.&S.G.c-c. steel	1/4" galv. steel	C.P. 133	April 23, 1913	Dec. 23, 1914
2	3/0 B.&S.G. alum.	10 B.&S.G.c-c. steel	1/4" galv. steel	C.P. 8:9	April 23, 1913	Dec. 23, 1914
3	3/0 B.&S.G. alum.	{ 6 B.&S.G. s-r.alum. 10 B.&S.G.c-c. steel	1/4" galv. steel	C.P. 133	April 23, 1913	Dec. 23, 1914
1	1/0 B.&S.G.s-r.alum.	6 B.&S.G.s-r.alum.	1/4" galv. steel	O.B. 11622	Sept. 20, 1915	May 18, 1916
1	1/0 B.&S.G.s-r.alum.	6 B.&S.G.s-r.alum.	1/4" galv. steel	O.B. 11622	Oct. 13, 1915	May 27, 1916
1	1/0 B.&S.G.s-r.alum.	6 B.&S.G.s-r.alum.	1/4" galv. steel	O.B. 11622	Oct. 14, 1915	June 6, 1916
1	1/0 B.&S.G.s-r.alum.	6 B.&S.G.s-r.alum.	1/4" galv. steel	O.B. 11622	Oct. 14, 1915	June 6, 1916
1	1/0 B.&S.G.s-r.alum.	6 B.&S.G.s-r.alum.	1/4" galv. steel	O.B. 11622	Oct. 14, 1915	June 6, 1916
1	4 B.&S.G. copper	None	6 B.W.G.galv.iron	C.P. 505	Oct. 24, 1917	Feb. 22, 1918

with No. 8, B. &amp; S.G. copper.

For inter-connected lines, see Eugenia system, Symbol "E."



DESCRIPTION  
NIAGARA SYSTEM—

New section number	Old section number	From	To	Avg. height of poles in feet	Avg. span in feet	Miles	No. of poles	Voltage
Lines terminating								
N. 961 x 32	L.T. 46	Pole No. 33, N961.....	St. Marys Portland Cement Co. dist. sta.	40	120	1.55	49	13,200

Lines terminating								
9 x 961	46	St. Marys trans. sta....	Pole No. 33, N961....	40	120	0.67	33	13,200

NOTE.—N9 x 961, L.T. 46, 29 poles, from pole No. 4 to pole No. 32 inclusive are owned by

NIAGARA SYSTEM—

New section number	Old section number	From	To	Avg. height of poles in feet	Avg. span in feet	Miles	No. of poles	Voltage
Lines terminating								
N. 1062 x 2	L.T. 109	Pole No. 76, N1062....	W.T.V. & I. Rly.....	.....	.....	0.02	2	13,200
1073 x 5	8	Pole No. 324, N1073...	Ingersoll mun. sta.....	40	120	2.80	131	13,200
1036 x 7	11B	Norwich dist. sta.....	Burgessville.....	30	160	3.25	115	2,300
1036 x 8	11A	Norwich dist. sta.....	Otterville.....	30	160	4.50	158	2,300
1066 x 9	10	Pole No. 508, N1066...	Tillsonburg mun. sta..	40	120	10.30	467	13,200
1009 x 70	200-	Tillsonburg.....	Springfield.....	30	160	12.54	418	4,000
1070 x 10	205							
1034 x 13	42							
		Beachville dist. sta....	Beachville White Lime Co.	.....	.....	1.00	.....	2,200

Lines terminating								
1064 x 33	106	Pole No. 289, N1064...	Embro dist. sta.....	35	132	6.04	256	13,200
1064 x 34	45	Pole No. 289, N1064...	Beachville dist. sta....	30	50	0.01	1	13,200
1066 x 36	11	Pole No. 508, N1066...	Norwich dist. sta.....	40	120	4.59	208	13,200

Lines terminating								
10 x 1062	8	Woodstock trans. sta...	Pole No. 76, N1062...	40	120	1.57	76	13,200
1062 x 64	8	Pole No. 76, N1062....	Pole No. 289, N1064..	40	120	4.70	213	13,200
10 x 1066	9	Woodstock trans. sta...	Pole No. 508, N1066..	40	120	11.08	508	13,200
1064 x 73	8	Pole No. 289, N1064...	Pole No. 324, N1073..	40	120	0.83	35	13,200

## OF LINES

## ST. MARYS DISTRICT—SYMBOL N9

No. of circuits	Size and material of power cable	Size and material of telephone wire	Size and material of ground cable	Make and style of power insulators	Date work began	Date placed in operation
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## at distributing stations

1	3/0 B.&S.G. alum.	8 B.&S.G. c-c. steel	1/4" galv. steel	Thom 2041	June 15, 1912	Sept. 7, 1912
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## at junctions

1	3/0 B.&S.G. alum.	8 B.&S.G. c-c. steel	1/4" galv. steel	Thom 2041	June 15, 1912	Sept. 7, 1912
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St. Marys local Hydro.

## WOODSTOCK DISTRICT—SYMBOL N10

No. of circuits	Size and material of power cable	Size and material of telephone wire	Size and material of ground cable	Make and style of power insulators	Date work began	Date placed in operation
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## at customers

1	2 B.&S.G. alum.	10 B.&S.G.c-c. steel	1/4" galv. steel	C.P. 136	Sept. 12, 1914	Sept. 13 1914
2	1/0 B.&S.G. alum.	10 B.&S.G.c-c. steel	1/4" galv. steel	Thom 2041	Nov. 14, 1910	Mar. 28, 1911
1	6 B.&S.G. copper	None	1/4" galv. steel	.....	.....	Dec. 7, 1916
1	6 B.&S.G. copper	None	1/4" galv. steel	.....	.....	1916
2	1/0 B.&S.G. alum.	10 B.&S.G.c-c. steel	1/4" galv. steel	Thom 2041	Jan. 2, 1911	April 29, 1911
1	6 B.&S.G. copper	None	1/4" galv. steel	.....	Nov. 23, 1916	July 1, 1917
1	2 B.&S.G. alum.	None	None	.....	.....	.....

## at distributing stations

1	1/4" galv. steel	10 B.&S.G.c-c. steel	1/4" galv. steel	C.P. 136	Oct. 1, 1914	Dec. 22, 1914
1	1/0 B.&S.G. alum.	.....	1/4" galv. steel	Thom 2041	June 1, 1912	July 17, 1912
1	2 B.&S.G. alum.	10 B.&S.G.c-c. steel	1/4" galv. steel	Thom 2041	Feb. 13, 1911	Mar. 30, 1911

## at junctions

2	1/0 B.&S.G. alum.	10 B.&S.G.c-c. steel	1/4" galv. steel	Thom 2041	Nov. 14, 1910	Mar. 28, 1911
2	1/0 B.&S.G. alum.	10 B.&S.G.c-c. steel	1/4" galv. steel	Thom 2041	Nov. 14, 1910	Mar. 28, 1911
2	1/0 B.&S.G. alum.	10 B.&S.G.c-c. steel	1/4" galv. steel	Thom 2041	Jan. 2, 1911	April 29, 1911
2	1/0 B.&S.G. alum.	10 B.&S.G.c-c. steel	1/4" galv. steel	Thom 2041	Nov. 14, 1910	Mar. 28, 1911

## DESCRIPTION

## NIAGARA SYSTEM—

New section number	Old section number	From	To	Avg. height of poles in feet	Avg. span in feet	Miles	No. of poles	Volt-age
Lines terminating								
N. 11 x 1101	L.T. 12	St. Thomas trans. sta.	St. Thomas mun. sta..	40	120	1.13	47	13,200
1135 x 6	154	West Lorne dist. sta....	Rodney.....	30	132	4.00	161	4,000

Lines terminating								
1134 x 35	153	Dutton dist. sta.....	West Lorne dist. sta. .	30	132	7.60	312	13,200
1168 x 37	41	Pole No. 112, N1168...	Port Stanley dist. sta.	35	120	10.03	462	13,200
1168 x 38	174	Pole No. 112, N1168...	Aylmer dist. sta.....	35	132	9.60	405	13,200
1162 x 34	121	Pole No. 5, N1162.....	Dutton dist. sta.....	30	132	18.33	756	13,200

Lines terminating								
11 x 1162	121	St. Thomas trans. sta.	Pole No. 5, N1162....	30	132	0.04	4	13,200
11 x 1168	41	St. Thomas trans. sta.	Pole No. 112, N1168..	35	120	2.24	112	13,200

NOTE.—N11 x 1101, L.T. 12, 23 poles, No. 25 to No. 47 inclusive, were supplied and erected by  
Other connected low-tension lines in this district are owned by the municipality.

## NIAGARA SYSTEM—

New section number	Old section number	From	To	Avg. height of poles in feet	Avg. span in feet	Miles	No. of poles	Volt-age
Lines terminating								
N. 1262 x 1	L.T. 69	Pole No. 246, N1262..	Brantford mun. sta. .	40	120	1.47	72	26,400
1262 x 2	69A	Pole No. 246, N1262..	L.E. & N. Ry.....	45	125	0.24	13	26,400
12 x 1219	128	Brant trans. sta.....	St. George.....	30	132	9.19	199	4,000
1267 x 6	114	Pole No. 1230, N1267	Simcoe mun. sta.....	35	132	0.06	5	26,400
1267 x 7	114A	Pole No. 1230, N1267	L.E. & N. Ry, Simcoe	45	120	0.25	11	26,400
1268 x 8	68	Pole No. 40, N1268...	Paris mun. sta.....	40	120	2.44	110	26,400
1274 x 12	92	Pole No. 714, N1274..	Plattsville.....	35	132	6.84	269	4,000
1241 x 13	91	Drumbo dist. sta....	Princeton.....	35	132	5.65	234	4,000
1274 x 14	184	Pole No. 714, N1274..	Wolverton Mills.....	35	132	1.81	1	4,000
1206 x 15	.....	Simcoe dist. sta.....	Port Dover.....	35	160	7.00	207	4,000
12 x 1216	.....	Brant trans. sta.....	Brantford Sand & Gravel Co.....	30	....	2.27	3	4,000
1240 x 18	.....	Ayr dist. sta.....	H.O. Cereal Co.....	30	126	1.50	63	4,000

Lines terminating								
1264 x 34	112	Pole No. 253, N1264..	Burford dist. sta.....	35	132	3.48	142	26,400
1265 x 35	113A	Pole No. 869, N1265..	Waterford dist. sta....	40	132	0.09	4	26,400
1270 x 40	89	Pole No. 448, N1270..	Ayr dist. sta.....	35	120	1.20	56	26,400
1272 x 41	90	Pole No. 713, N1272..	Drumbo dist. sta.....	35	132	0.50	21	26,400



## OF LINES

## ST. THOMAS DISTRICT—SYMBOL N11

No. of circuits	Size and material of power cable	Size and material of telephone wire	Size and material of ground cable	Make and style of power insulators	Date work began	Date placed in operation
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## at customers

2	1/0 B.&S.G. alum.	10 B.&S.G.c-c. steel	1/4" galv. steel	Thom 2041	Dec. 14, 1910	Dec. 30, 1910
1	6 B.&S.G. m.h-d. copper	None	6 B.W.G.galv.iron	C.P. 259	Jan. 2, 1917	Jan. 15, 1917

## at distributing stations

1	1/0 B.&S.G.s-r.alum.	None	None	C.P. 135	Dec. 4, 1916	Dec. 22, 1916
1	2 B.&S.G. alum.	8 B.&S.G.c-c. steel	1/4" galv. steel	Thom 2041	Oct. 16, 1911	Mar. 9, 1912
1	1/4" galv. steel	9 B.W.G. galv. iron	1/4" galv. steel	C.P. 839	Aug. 27, 1917	Feb. 11, 1918
1	1/0 B.&S.G. alum.	None	None	C.P. 136	May 3, 1915	Aug. 27, 1915

## at junctions

1	1/0 B.&S.G. alum.	None	None	C.P. 136	May 3, 1915	Aug. 27, 1915
1	2 B.&S.G. alum.	8 B.&S.G.c.c. steel	1/4" galv. steel	Thom 2041	Oct. 16, 1911	Mar. 9, 1912

St. Thomas local Hydro.

## BRANT DISTRICT—SYMBOL N12

No. of circuits	Size and material of power cable	Size and material of telephone wire	Size and material of ground cable	Make and style of power insulators	Date work began	Date placed in operation
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## at customers

2	3/0 B.&S.G. alum.	10 B.&S.G.c-c. steel	1/4" galv. steel	C.P. 102	Dec. 15, 1913	Jan. 17, 1914
2	2 B.&S.G.s-r. alum.	10 B.&S.G.c-c. steel	1/4" galv. steel	O.B. 11622	Sept. 9, 1921	Sept. 21, 1921
1	2 B.&S.G.s-r. alum.	None	1/4" galv. steel	O.B. 9403	July 1, 1915	Aug. 17, 1915
1	2 B.&S.G.s-r. alum.	10 B.&S.G.h-d. cop.	1/4" galv. steel	C.P. 102	Nov. 26, 1914	May 9, 1915
1	2 B.&S.G.s-r. alum.	10 B.W.G.galv.iron	1/4" galv. steel	C.P. 133	.....	July 14, 1916
2	3/0 B.&S.G. alum.	10 B.&S.G.c-c. steel	1/4" galv. steel	C.P. 102	Nov. 11, 1913	Jan. 3, 1914
1	4 B.&S.G. copper	None	1/4" galv. steel	Parker2822	Aug. 17, 1914	Dec. 1, 1914
1	6 B.&S.G. copper	None	1/4" galv. steel	Parker2822	Aug. 17, 1914	Dec. 18, 1914
1	6 B.&S.G. m.h-d.cop	None	None	C.P. 105	Sept. 18, 1918	Oct. 22, 1918
1	2 B.&S.G.s-r. alum.	None	3x13 galv. steel	C.P. 105	July 6, 1921	Nov. 8, 1921
1	6 B.&S.G. copper	.....	.....	Thom 2041	Nov. 17, 1921	Jan. 15, 1922
1	6 B.&S.G. copper	None	1/4" galv. steel	C.P. 105	Mar. 14, 1923	Mar. 28, 1923

## at distributing stations

1	2 B.&S.G.s-r. alum.	10 B.&S.G.h-d. cop.	1/4" galv. steel	C.P. 102	Nov. 21, 1914	May 6, 1915
1	2 B.&S.G.s-r. alum.	10 B.&S.G.h-d. cop.	1/4" galv. steel	C.P. 102	Nov. 21, 1914	May 10, 1915
1	1/0 B.&S.G. alum.	10 B.&S.G.c.c. steel	1/4" galv. steel	C.P. 102	Sept. 15, 1914	Dec. 1, 1914
1	1/0 B.&S.G. alum.	10 B.&S.G.c.c. steel	1/4" galv. steel	C.P. 102	July 13, 1914	Dec. 1, 1914

DESCRIPTION  
NIAGARA SYSTEM—

New section number	Old section number	From	To	Avg. height of poles in feet	Avg. span in feet	Miles	No. of poles	Voltage
<b>Lines terminating</b>								
N. 12 x 1261	L.T. 69	Brant trans. sta. ....	Pole No. 19, N1261...	40	120	0.33	17 <sup>*</sup> 19	26,400
1261 x 76	69	Pole No. 19, N1261...	Pole No. 108, N1276..	40	120	1.92	89	26,400
1268 x 64	111	Pole No. 40, N1268...	Pole No. 253, N1264..	35	132	5.86	228	26,400
1264 x 65	113	Pole No. 253, N1264...	Pole No. 869, N1265..	35	132	15.06	616	26,400
1275 x 67	114	Pole No. 1145, N1275..	Pole No. 1230, N1267..	35	132	2.02	85	26,400
1265 x 75	114	Pole No. 869, N1265..	Pole No. 1145, N1275..	35	132	6.79	276	26,400
1261 x 68	68	Pole No. 19, N1261...	Pole No. 40, N1268...	40	120	0.44	21	26,400
1208 x 69	88	Paris mun. sta. ....	Pole No. 196, N1269..	35	132	1.09	49	26,400
1269 x 70	88	Pole No. 196, N1269..	Pole No. 448, N1270..	35	132	6.14	252	26,400
1270 x 71	90	Pole No. 448, N1270..	Pole No. 636, N1271..	35	132	4.53	188	26,400
1271 x 72	90	Pole No. 636, N1271..	Pole No. 713, N1272..	35	132	1.80	77	26,400
1241 x 74	92	Drumbo dist. sta. ....	Pole No. 714, N1274..	35	132	0.49	21	4,000
1276 x 62	69	Pole No. 108, N1276..	Pole No. 246, N1262..	40	120	2.94	138	26,400

NOTE.—N12 x 1216—This line is carried on 3 new poles, erected on Brant station property. The From pole No. 108 to the Brantford Sand and Gravel Co., the line is owned by the N1206 x 15—This line is carried on L.T. 114 poles from Simcoe municipal station to Jct. \*Independent poles.

NIAGARA SYSTEM—

<b>Lines terminating</b>								
N. 1331 x 2	L.T. 26&26A	Port Credit dist. sta...	Port Credit Brick Wks	45	120	0.88	43	13,200
1363 x 3	163	Pole No. 30.....	Shale Brick Co.....	55	120	1.22	59	13,200
1368 x 4	27	Pole No. 230.....	Brampton mun. sta...	40	120	6.17	276	13,200
1367 x 5	79A	Pole No. 27.....	Milton Br., Streetsville	35	120	0.77	36	4,000
1370 x 7	181	Pole No. 52.....	Tor. Milling Co.....	25	120	0.72	33	4,000
1369 x 8	62	Pole No. 381.....	Milton mun. sta.....	40	120	13.36	592	13,200
1370 x 11	214	Pole No. 52.....	W. D. Reid & Sons...	30	132	0.22	9	4,000
1305 x 6	79A	Milton Brick Co., Streetsville	Streetsville Brick Co. ....	.....	.....	0.25	12	4,000
<b>Lines terminating</b>								
1362 x 31	26	Pole No. 84, N1362...	Port Credit dist. sta...	40	120	0.32	16	13,200
1369 x 39	79	Pole No. 381, N1369..	Streetsville dist. sta...	45	120	0.41	19	13,200
<b>Lines terminating</b>								
13 x 1361	26	Cooksville trans. sta. .	Pole No. 6, N1361....	40	120	0.08	6	13,200
1361 x 62	26	Pole No. 6, N1361....	Pole No. 84, N1362...	40	120	1.79	78	13,200
13 x 1363	27	Cooksville trans. sta. .	Pole No. 30, N1363...	40	120	0.57	30	13,200
1363 x 64	27	Pole No. 30, N1363...	Pole No. 89, N1364...	40	120	1.32	59	13,200
1339 x 67	79A	Streetsville dist. sta...	Pole No. 27, N1367...	35	120	0.53	22	4,000
1364 x 68	27	Pole No. 89, N1364...	Pole No. 230, N1368..	40	120	3.18	141	13,200
1368 x 69	62	Pole No. 230, N1368..	Pole No. 381, N1369..	40	120	3.36	151	13,200
1362x1661	36	Pole No. 84, N1362...	Pole No. 332, N1661..	45	120	5.48	250	13,200
1367x70	181	Pole No. 27, N1367...	Pole No. 52, N1670...	25	120	0.51	25	4,000

## OF LINES

## BRANT DISTRICT—SYMBOL N12—Continued

No. of circuits	Size and material of power cable	Size and material of telephone wire	Size and material of ground cable	Make and style of power insulators	Date work began	Date placed in operation
5	2 B.&S.G.s-r.alum. 1-cir. 3/0 B.&S.G.alum. 4-cir.	10 B.&S.G.c-c.steel	1/4" galv. steel	C.P. 102	Dec. 15, 1913	Jan. 17, 1914
2	3/0 B.&S.G. alum.	10 B.&S.G.c-c.steel	1/4" galv. steel	C.P. 102	Dec. 15, 1913	Jan. 17, 1914
1	2 B.&S.G.s-r. alum.	10 B.&S.G. copper	1/4" galv. steel	C.P. 102	Nov. 6, 1914	May 6, 1915
1	2 B.&S.G.s-r. alum.	10 B.&S.G.h-d. cop.	1/4" galv. steel	C.P. 102	Nov. 21, 1914	May 10, 1915
1	2 B.&S.G.s-r. alum.	10 B.&S.G.h-d. cop.	1/4" galv. steel	C.P. 102	Nov. 26, 1914	May 9, 1915
1	2 B.&S.G.s-r. alum.	10 B.&S.G.h-d. cop.	1/4" galv. steel	C.P. 102	Nov. 26, 1914	May 9, 1915
3	1-cir. 2 B.&S.G.s-r. alum. 2-cirs., 3/0 B.&S.G. alum.	10 B.&S.G.c-c. steel	1/4" galv. steel	C.P. 102	Nov. 11, 1913	Jan. 3, 1914
1	1/0 B.&S.G. alum.	10 B.&S.G.c-c. steel	1/4" galv. steel	C.P. 102	July 21, 1914	Dec. 1, 1914
1	1/0 B.&S.G. alum.	10 B.&S.G.c-c. steel	1/4" galv. steel	C.P. 102	July 21, 1914	Dec. 1, 1914
1	1/0 B.&S.G. alum.	10 B.&S.G.c-c. steel	1/4" galv. steel	C.P. 102	July 13, 1914	Dec. 1, 1914
1	1/0 B.&S.G. alum.	10 B.&S.G.c-c. steel	1/4" galv. steel	C.P. 102	July 13, 1914	Dec. 1, 1914
1	4 B.&S.G. copper	None	1/4" galv. steel	Parker 2822	Aug. 17, 1914	Dec. 1, 1914
2	3/0 B.&S.G. alum.	10 B.&S.G.c-c. steel	1/4" galv. steel	C.P. 102	Dec. 15, 1913	Jan. 17, 1914

line is then carried on L.T. 111 poles from No. 3 to No. 17, then on L.T. 69 poles from No. 20 to No. 108. Gravel Co. pole No. 1145—90 poles.

## COOKSVILLE DISTRICT—SYMBOL N13

## at customers

2	2 B.&S.G. alum.	10 B.&S.G.c-c. steel	1/4" galv. steel	Thom 2041	April 5, 1911	July 23, 1911
1	2 B.&S.G.s-r. alum.	10 B.&S.G.c-c. steel	1/4" galv. steel	Thom 2041	Mar. 6, 1917	April 22, 1917
2	2/0 B.&S.G.s-r.alum.	10 B.&S.G.c-c. steel	1/4" galv. steel	Thom 2041	Feb. 15, 1911	May 6, 1911
1	6 B.&S.G. copper	None	6 B.W.G.galv.iron	.....	.....	.....
1	6 B.&S.G. copper	None	6 B.W.G.galv.iron	C.P. 105	Feb. 2, 1918	Mar. 9, 1918
1	3/0 B.&S.G. alum.	10 B.&S.G.c-c. steel	1/4" galv. steel	Thom 2041	Nov. 25, 1912	Mar. 13, 1913
1	6 B.&S.G. copper	None	1/4" galv. steel	C.P. 105	Dec. 22, 1919	Jan. 4, 1920
1	.....	.....	.....	.....	.....	.....

## at distributing stations

2	2 B.&S.G. alum.	10 B.&S.G.c-c. steel	1/4" galv. steel	Thom 2041	Feb. 24, 1911	July 10, 1911
1	2 B.&S.G. alum.	10 B.&S.G.c-c. steel	1/4" galv. steel	Thom 2041	Nov. 1, 1913	Nov. 24, 1913

## at junctions

3	1-cir. 4 B.&S.G. copper 2-cirs. 2 B.&S.G. alum.	10 B.&S.G.c-c. steel	1/4" galv. steel	{ O.B. 12546 Thom 2041	Feb. 24, 1911	July 10, 1911
2	2 B.&S.G. alum. 2-cir. 3/0 B.&S.G. s-r. alum.	10 B.&S.G.c-c. steel	1/4" galv. steel	{ O.B. 12546 Thom 2041	Feb. 24, 1911	July 10, 1911
3	1-cir. 2 B.&S.G.s-r. alum.	10 B.&S.G.c-c. steel	1/4" galv. steel	{ O.B. 12546 Thom 2041	Feb. 15, 1911	May 6, 1911
2	3/0 B.&S.G.s-r.alum.	10 B.&S.G.c-c. steel	1/4" galv. steel	{ O.B. 12546 Thom 2041	Feb. 15, 1911	May 6, 1911
1	6 B.&S.G. copper	None	6 B.W.G.galv.iron	.....	.....	.....
2	3/0 B.&S.G.s-r.alum.	10 B.&S.G.c-c. steel	1/4" galv. steel	Thom 2041	Feb. 15, 1911	May 6, 1911
1	3/0 B.&S.G. alum.	10 B.&S.G.c-c. steel	1/4" galv. steel	Thom 2041	Nov. 25, 1912	Mar. 13, 1913
2	1-2 B.&S.G.s-r.alum. 1-2 B.&S.G. alum.	8 B.&S.G.c-c. steel	1/4" galv. steel	{ O.B. 12546 Thom 2041	April 26, 1911	Feb. 29, 1912
1	6 B.&S.G. copper	None	6 B.W.G.galv.iron	C.P. 105	Feb. 2, 1918	Mar. 9, 1913



DESCRIPTION  
NIAGARA SYSTEM—

New section number	Old section number	From	To	Avg. height of poles in feet	Avg. span in feet	Miles	No. of poles	Volt- age
<b>Lines terminating</b>								
N.	L.T.							
1462 x 1	84	Pole No. 41, N1462...	Chatham mun. sta....	40	120	1.11	59	26,400
1432 x 3	115	Tilbury dist. sta.....	Comber.....	30	132	7.26	306	4,000
1435 x 6	122	Ridgetown dist. sta....	Highgate.....	30	120	6.18	10	4,000
1443 x 14	137	Petrolia dist. sta.....	Wyoming.....	25	132	7.92	26	4,000
1477 x 17	135	Pole No. 2304, N1477..	Sarnia mun. sta.....	35	125	7.73	333	26,400
1438 x 19	212	Bothwell dist. sta.....	Newbury.....	30	160	5.93	210	4,000
1419 x 20	213	Newbury.....	Glencoe.....	30	160	5.89	199	4,000
1419 x 21	.....	Newbury.....	Wardsville.....	30	160	2.07	72	2,300
1483 x 23	.....	Pole No. 849, N1483..	Dom. Sugar Co., Wallaceburg	40	125	0.81	35	26,400
1445 x 24	.....	Forest dist. sta.....	Thedford.....	30	160	11.50	391	4,000
1446 x 26	.....	Watford dist. sta.....	Alvinston.....	30	160	10.60	334	4,000
1455 x 22	.....	Fletcher dist. sta.....	Merlin.....	30	160	4.70	144	4,000

<b>Lines terminating</b>								
1485 x 32	101	Pole No. 425, N1485...	Tilbury dist. sta.....	35	132	7.41	84	26,400
1468 x 34	126	Pole No. 69, N1468...	Blenheim dist. sta....	35	132	9.52	388	26,400
1466 x 35	127	Pole No. 783, N1466...	Ridgetown dist. sta...	35	132	0.43	20	26,400
1467 x 37	123	Pole No. 676, N1467...	Thamesville dist. sta..	35	132	0.09	6	26,400
1467 x 38	124	Pole No. 676, N1467...	Bothwell dist. sta.....	35	132	9.83	407	26,400
1483 x 39	104	Pole No. 849, N1483...	Wallaceburg dist. sta..	40	120	1.18	56	26,400
1470 x 40	105	Pole No. 795, N1470...	Dresden dist. sta.....	40	132	0.68	33	26,400
1471 x 41	172	Pole No. 1445A, N1471	Oil Springs dist. sta...	35	132	1.42	63	26,400
1471 x 42	173	Pole No. 1445A, N1471	Brigden dist. sta.....	35	132	8.88	360	26,400
1471 x 43	131	Pole No. 1445A, N1471	Petrolia dist. sta.....	35	125	6.77	297	26,400
1476 x 45	145	Pole No. 2336, N1476..	Forest dist. sta.....	35	132	10.90	444	26,400
1476 x 46	157	Pole No. 2336, N1476..	Watford dist. sta.....	35	132	10.84	443	26,400
1477 x 48	.....	Pole No. 2304, N1477..	Perch dist. sta.....	35	125	3.56	151	26,400
1485 x 55	.....	Pole No. 425, N1485...	Fletcher dist. sta.....	35	150	2.95	118	26,400

<b>Lines terminating</b>								
14 x 1462	84	Kent trans. sta.....	Pole No. 41, N1462...	40	120	0.82	41	26,400
1468 x 65	123	Pole No. 68, N1468...	Pole No. 470, N1468..	35	132	9.74	402	26,400
1465 x 66	127	Pole No. 470, N1465...	Pole No. 783, N1466..	35	132	7.52	313	26,400
1465 x 67	123	Pole No. 470, N1465...	Pole No. 676, N1467..	35	132	4.78	206	26,400
14 x 1468	102	Kent trans. sta.....	Pole No. 68, N1468...	40	120	1.48	68	26,400
1468 x 69	103	Pole No. 68, N1468...	Pole No. 520, N1469..	40	120	9.98	452	26,400
1469 x 70	105	Pole No. 520, N1469...	Pole No. 795, N1470..	40	132	6.71	275	26,400
1470 x 71	131	Pole No. 795, N1470...	Pole No. 1445A, N1471	35	125	15.05	651	26,400
1475 x 74	145	Pole No. 1962, N1475..	Pole No. 2058, N1474..	35	132	2.35	96	26,400
1443 x 75	132	Petrolia dist. sta.....	Pole No. 1962, N1475..	40	125	4.89	219	26,400
1474 x 76	145	Pole No. 2058, N1474..	Pole No. 2336, N1476..	35	132	6.85	278	26,400
1475 x 77	133	Pole No. 1962, N1475..	Pole No. 2304, N1477..	35	125	7.92	342	26,400
1469 x 83	104	Pole No. 520, N1469...	Pole No. 849, N1483...	40	120	7.32	329	26,400
1462 x 85	101	Pole No. 41, N1462...	Pole No. 425, N1485..	35	132	9.57	.....	26,400

## OF LINES

## KENT DISTRICT—SYMBOL N14

No. of circuits	Size and material of power cable	Size and material of telephone wire	Size and material of ground cable	Make and style of power insulators	Date work began	Date placed in operation
at customers						
2	2/0 B.&S.G. alum.	10 B.&S.G.c-c. steel	1/4" galv. steel	C.P. 102	Oct. 21, 1914	Feb. 1, 1915
1	2 B.&S.G.s-r. alum.	None	1/4" galv. steel	O.B. 9403	Jan. 14, 1915	April 20, 1915
1	6 B.&S.G.m.h-d.cop.	None	6 B.W.G.galv.iron	C.P. 259	Oct. 3, 1916	Nov. 6, 1916
1	6 B.&S.G.m.h-d.cop.	None	6 B.W.G.galv.iron	C.P. 259	Sept. 1, 1915	Oct. 4, 1916
2	3/0 B.&S.G. alum.	9 B.W.G. galv. iron	1/4" galv. steel	O.B. 11622	May 9, 1916	Nov. 10, 1916
1	2 B.&S.G.s-r. alum.	None	9/32" galv. steel	C.P. 105	Jan. 6, 1920	Aug. 13, 1920
1	2 B.&S.G.s-r. alum.	None	9/32" galv. steel	C.P. 105	Feb. 2, 1920	Aug. 13, 1920
1	6 B.&S.G. bare cop.	None	None	C.P. 105	April 15, 1921	June 15, 1921
2	3/0 B.&S.G. alum.	10 B.&S.G.c-c. steel	5/16" galv. steel	C.P. 133	Oct. 24, 1921	Mar. 1, 1922
1	6 B.&S.G.h-d. cop.	None	1/4" galv. steel	C.P. 105	Apr. 10., 1922	May 8, 1922
1	2 B.&S.G.s-r. alum.	None	3 x 13 galv. steel	C.P. 105	Nov. 23, 1921	Mar. 22, 1922
1	2 B.&S.G.s-r. alum.	None	1/4" galv. steel	C.P. 105	Nov. 8, 1922	Dec. 22, 1922

## at distributing stations

1	2 B.&S.G.s-r. alum.	10 B.&S.G.c-c. steel	1/4" galv. steel	C.P. 133	Jan. 13, 1915	Mar. 3, 1915
1	2 B.&S.G.s-r. alum.	9 B.W.G. galv. iron	1/4" galv. steel	C.P. 133	July 2, 1915	Oct. 20, 1915
1	2 B.&S.G.s-r. alum.	9 B.W.G. galv. iron	1/4" galv. steel	C.P. 133	June 24, 1915	Nov. 24, 1915
1	1/0 B.&S.G. alum.-	9 B.W.G. galv. iron	1/4" galv. steel	C.P. 133	May 18, 1915	Sept. 14, 1915
1	2 B.&S.G.s-r. alum.	9 B.W.G. galv. iron	1/4" galv. steel	C.P. 133	June 26, 1915	Aug. 17, 1915
2	1-1/0 B.&S.G. alum.	10 B.&S.G.h-d.cop.	1/4" galv. steel	C.P. 133	Nov. 6, 1914	Feb. 3, 1915
	1-3/0 B.&S.G. alum.					
2	3/0 B.&S.G. alum.	10 B.&S.G.h-d.cop.	1/4" galv. steel	C.P. 133	Nov. 3, 1914	Mar. 30, 1915
1	6 B.W.G. galv. iron	9 B.W.G. galv. iron	1/4" galv. steel	O.B. 11622	July 20, 1917	Dec. 5, 1917
1	6 B.W.G. galv. iron	9 B.W.G. galv. iron	1/4" galv. steel	C.P. 889	Aug. 1, 1917	Dec. 6, 1917
2	3/0 B.&S.G. alum.	9 B.W.G. galv. iron	1/4" galv. steel	O.B. 11622	Aug. 30, 1915	April 6, 1916
1	6 B.W.G. galv. iron	9 B.W.G. galv. iron	6 B.W.G.galv.iron	C.P. 889	June 26, 1915	Feb. 7, 1917
1	6 B.W.G. galv. iron	9 B.W.G. galv. iron	1/4" galv. steel	C.P. 889	June 9, 1917	Aug. 10, 1917
2	5/16" galv. steel	9 B.W.G. galv. iron	5/16" galv. steel	C.P. 889	Sept. 19, 1922	Nov. 19, 1922
1	5/16" galv. steel	9 B.W.G.galv. iron	5/16" galv. steel	C.P. 889	Nov. 20, 1922	Dec. 22, 1922

## at junctions

3	1-cir. 2 B.&S.G.s-r. alum.	10 B.&S.G.c-c. steel	1/4" galv. steel	C.P. 102	Oct. 21, 1914	Feb. 1, 1915
	2-cirs. 2/0 B.&S.G. al.					
1	1/0 B.&S.G. alum.	9 B.W.G. galv. iron	1/4" galv. steel	C.P. 133	May 18, 1915	Sept. 14, 1915
1	2 B.&S.G.s-r. alum.	9 B.W.G. galv. iron	1/4" galv. steel	C.P. 133	June 24, 1915	Nov. 24, 1915
1	1/0 B.&S.G. alum.	9 B.W.G. galv. iron	1/4" galv. steel	C.P. 133	May 18, 1915	Sept. 14, 1915
3	2-3/0 B.&S.G. alum.	10 B.&S.G.h-d. cop.	1/4" galv. steel	O.B. 11622	Oct. 28, 1914	Feb. 3, 1915
	1-1/0 B.&S.G. alum.			C.P. 133		
2	3/0 B.&S.G. alum.	10 B.&S.G.h-d. cop.	1/4" galv. steel	C.P. 133	Oct. 30, 1914	Feb. 3, 1915
2	3/0 B.&S.G. alum.	10 B.&S.G.h-d. cop.	1/4" galv. steel	C.P. 133	Nov. 3, 1914	Mar. 30, 1915
2	3/0 B.&S.G. alum.	9 B.W.G. galv. iron	1/4" galv. steel	O.B. 11622	Aug. 30, 1915	April 6, 1916
1	5 B.W.G. galv. iron	9 B.W.G. galv. iron	6 B.W.G.galv.iron	C.P. 889	June 26, 1915	Feb. 7, 1917
2	3/0 B.&S.G. alu n.	9 B.W.G. galv. iron	1/4" galv. steel	O.B. 11622	Mar. 1, 1916	Nov. 10, 1916
1	6 B.W.G. galv. iron	9 B.W.G. galv. iron	6 B.W.G.galv.iron	C.P. 889	June 26, 1915	Feb. 7, 1917
2	3/0 B.&S.G. alum.	9 B.W.G. galv. iron	1/4" galv. steel	O.B. 11622	April 6, 1916	Nov. 10, 1916
2	1-cir. 1/0 B.&S.G. al.					
	1-cir. 3/0 B.&S.G. al.	10 B.&S.G.h-d.cop.	1/4" galv. steel	C.P. 133	Nov. 6, 1914	Feb. 3, 1915
1	2 B.&S.G.s-r. alum.	10 B.&S.G.c-c. steel	1/4" galv. steel	C.P. 133	Jan. 13, 1915	Mar. 3, 1915



DESCRIPTION  
NIAGARA SYSTEM—

New section number	Old section number	From	To	Avg. height of poles in feet	Avg. span in feet	Miles	No. of poles	Voltage
<b>Lines terminating</b>								
N. 1562 x 1	L.T. 82	Pole No. 55, N1562....	Windsor mun. sta.....	45	120	2.27	103	26,400
1562 x 2	83	Pole No. 55, N1562....	Walkerville mun. sta..	40	120	1.30	62	26,400
1502 x 5	.....	Walkerville mun. sta..	Riverside.....	35	132	4.60	7	4,000
1505 x 6	.....	Riverside.....	Tecumseth.....	35	132	2.20	2	4,000
1506 x 7	.....	Tecumseth.....	St. Clair Beach.....	.....	.....	1.20	.....	4,000
1538 x 8	.....	Belle River dist. sta...	Belle River.....	30	132	0.14	7	4,000

<b>Lines terminating</b>								
15 x 1533	165	Essex trans. sta.....	Can. Salt. Co. dist. sta.	40	132	8.10	351	26,400
*15x1538	.....	Essex trans. sta.....	Belle River dist. sta..	..	..	13.98	..	26,400

<b>Lines terminating</b>								
15 x 1562	81	Essex trans. sta.....	Pole No. 55, N1562...	45	120	1.10	55	26,400

\*NOTE.—15 x 1538 carried on H.T. telephone poles (N 14 x 15).

NIAGARA SYSTEM—

<b>Lines terminating</b>								
N. 1663 x 3	L.T. 34	Pole No. 250, N1663...	Weston mun. sta.....	40	120	1.62	75	13,200
1634 x 5	108	Woodbridge dist. sta...	Bolton.....	35	132	12.95	540	13,200
1667 x 7	110B	Pole No. 33, N1667....	Asylum Brick Yard...	(Not owned by H. E.P.C.)		.....	.....	.....
1631 x 10	.....	Etobicoke dist. sta.....	Goodyear Tire & Rubber Co.	40	100	0.13	6	2,300
1631 x 2	.....	Etobicoke dist. sta.....	Mimico.....	.....	.....	0.40	.....	4,000

<b>Lines terminating</b>								
1666 x 31	155	Pole No. 122, N1666...	Etobicoke dist. sta....	40	125	0.21	10	26,400
1661 x 32	51	Pole No. 332, N1661...	Mimico dist. sta.....	40	120	0.46	18	13,200
1663 x 34	107	Pole No. 250, N1663...	Woodbridge dist. sta..	35	132	6.44	276	13,200

<b>Lines terminating</b>								
1631 x 61	36	Etobicoke dist. sta.....	Pole No. 332, N1661..	45	120	0.11	6	13,200
1362x1661	36	Pole No. 84, N1362....	Pole No. 332, N1661..	45	120	5.48	250	13,200
1664x63	34	Pole No. 105, N1664...	Pole No. 250, N1663..	40	120	3.24	145	13,200
16x1666	155	York trans. sta.....	Pole No. 122, N1666..	40	125	2.59	124	26,400
1669x67	110A	Pole No. 12, N1669....	Pole No. 33, N1667...	30	125	0.55	21	2,200
1631x66	216	Etobicoke dist. sta.....	Pole No. 122 (Cable only)	.....	.....	0.22	.....	2,200
1632x69	110A	Mimico dist. sta.....	Pole No. 12, N1669....	30	125	0.22	12	2,200
16x1664	.....	York trans. sta.....	Pole No. 105, N1664..	40	120	2.25	105	13,200
1631x69	.....	Etobicoke dist. sta.....	Pole No. 12, N1669....	.....	.....	.....	.....	.....



## OF LINES

## ESSEX DISTRICT—SYMBOL N15

No. of circuits	Size and material of power cable	Size and material of telephone wire	Size and material of ground cable	Make and style of power insulators	Date work began	Date placed in operation
at customers						
2	3/0 B.&S.G. alum.	10 B.&S.G. c-c. steel	1/4" galv. steel	C.P. 102	July 31, 1914	Sept. 18, 1914
2	3/0 B.&S.G. alum.	10 B.&S.G. c-c. steel	1/4" galv. steel	C.P. 102	June 2, 1914	Sept. 6, 1914
1	2 B.&S.G. d-b. w.p. copper	None	None	C.P. 505	July 3, 1922	Aug. 3, 1922
1	4 B.&S.G. d-b. w.p. copper	None	None	C.P. 105	July 3, 1922	Aug. 3, 1922
1	6 B.&S.G. d-b. w.p. copper	None	None	C.P. 105	July 3, 1922	Aug. 3, 1922
1	6 B.&S.G. d-b. w.p. copper	None	6 B.&S.G. bare copper	C.P. 105	Oct. 26, 1922	Dec. 5, 1922

## at distributing stations

2	1/0 B.&S.G. copper	9 B.W.G. galv. iron	1/4" galv. steel	C.P. 889	July 10, 1917	Nov. 9, 1917
1	5/16" galv. steel	None	None	C.P. 889	Oct. 4, 1922	Dec. 5, 1922

## at junctions

4	3/0 B.&S.G. alum.	10 B.&S.G. c.c. steel	1/4" galv. steel	C.P. 102	July 28, 1914	Sept. 6, 1914
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## YORK DISTRICT—SYMBOL N16

## at customers

2	1-3/0 B.&S.G. s-r. alum. 1-cir.	8 B.&S.G. c-c. steel	1/4" galv. steel	O.B. 12546 Thom 2041	April 19, 1911	July 24, 1911
1	2 B.&S.G. alum. 1-cir.	10 B.&S.G. c-c. steel	1/4" galv. steel	C.P. 136	Oct. 20, 1914	Jan. 26, 1915
1	3/0 B.&S.G. alum.	None	None	C.P. 505	April 19, 1922	April 21, 1922
1	350,000 c.m. w.p. copper	None	None	C.P. 505	.....	Oct. 19, 1921
1	2/0 B.&S.G. copper	None	None	C.P. 505	.....	Oct. 19, 1921
1	4/0 B.&S.G. copper	None	None	C.P. 505	.....	Oct. 19, 1921

## at distributing stations

2	1/0 B.&S.G. copper	9 B.W.G. galv. iron	9/32" galv. steel	O.B. 11622	Feb. 9, 1917	Oct. 10, 1919
1	2 B.&S.G. alum.	8 B.&S.G. c-c. steel	1/4" galv. steel	Thom 2041	.....	.....
1	1/0 B.&S.G. alum..	10 B.&S.G. c-c. steel	1/4" galv. steel	C.P. 136	Sept. 25, 1914	Dec. 2, 1914

## at junctions

2	1-2 B.&S.G. s-r. alum.	8 B.&S.G. c-c. steel	1/4" galv. steel	Thom 2041	April 26, 1911	Feb. 29, 1912
2	1-2 B.&S.G. alum.	8 B.&S.G. c-c. steel	1/4" galv. steel	Thom 2041	April 26, 1911	Feb. 29, 1912
2	1-2 B.&S.G. s-r. alum.	8 B.&S.G. c-c. steel	1/4" galv. steel	Thom 2041	April 26, 1911	Feb. 29, 1912
2	1-2 B.&S.G. alum.	8 B.&S.G. c-c. steel	1/4" galv. steel	Thom 2041	April 26, 1911	Feb. 29, 1912
2	1-cir. 2 B.&S.G. alum	8 B.&S.G. c-c. steel	1/4" galv. steel	O.B. 12546	April 19, 1911	July 24, 1911
2	1-cir. 3/0 B.&S.G. s-r. alum.	8 B.&S.G. c-c. steel	1/4" galv. steel	Thom 2041	April 19, 1911	July 24, 1911
2	1/0 B.&S.G. copper	9 B.W.G. galv. iron	9/32" galv. steel	O.B. 11622	Feb. 9, 1917	Oct. 10, 1919
1	2/0 B.&S.G. copper	None	1/4" galv. steel	O.B. 9403	Oct. 24, 1914	Feb. 17, 1915
1	2/0 B.&S.G. copper	None	.....	.....	.....	.....
1	2/0 B.&S.G. copper	Line disconnected	1/4" galv. steel	O.B. 9403	Oct. 24, 1914	Feb. 17, 1915
2	3/0 B.&S.G. alum.	10 B.&S.G. c-c. steel	5/16" galv. steel	O.B. 12546	Aug. 3, 1922	Nov. 19, 1922
2	2/0 B.&S.G. copper	None	None	.....	.....	.....

## DESCRIPTION

## THOROLD SYSTEM—

New section number	Old section number	From	To	Avg. height of poles in feet	Avg. span in feet	Miles	No. of poles	Voltage
I. 51 x 1	L.T. .....	Jct. Pole No. 372 O.P.Co. lines	Thorold dist. sta.....	35	120	1.04	46	12,000

## ESSEX COUNTY SYSTEM

New section number	Old section number	From	To	Avg. height of poles in feet	Avg. span in feet	Miles	No. of poles	Voltage
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## Lines terminating

J. 51 x 1	L.T. 188	Pole No. 231, J51.....	Canard River dist.sta.	35	160	6.00	190	26,400
52 x 2	190	Pole No. 642, J52.....	Amherstburg dist. sta.	35	160	2.30	78	26,400
52 x 3	191	Pole No. 642, J52.....	Harrow dist. sta.....	35	160	12.75	401	26,400
54 x 4	193	Pole No. 1374, J54....	Kingsville dist. sta....	35	160	0.50	7	26,400
55 x 5	195	Pole No. 1412, J55....	Leamington dist. sta..	35	160	7.50	289	26,400
56 x 6	187	Pole No. 1605, J56....	Cottam dist. sta.....	35	160	0.80	22	26,400
56 x 7	197	Pole No. 1605, J56....	Essex dist. sta.....	35	160	4.70	157	26,400

## Lines terminating

15 x 51	185	Essex trans. sta.....	Pole No. 231, J51.....	.....	.....	5.30	.....	26,400
		Conductors and Cross Arms only carried on N			15x15	33 poles		
1 x 52	189	Canard River dist. sta..	Pole No. 642, J22.....	35	160	7.25	220	26,400
3 x 54	192	Harrow dist. sta.....	Pole No. 1374, J54....	35	160	9.70	334	26,400
54 x 55	194	Pole No. 1374, J54....	Pole No. 1412, J55....	35	160	0.70	38	26,400
55 x 56	196	Pole No. 1412, J55....	Pole No. 1605, J56....	35	160	5.20	193	26,400

## Lines terminating

1 x 801	.....	Canard River dist. sta..	Jct. to H.E.P.C. Rly..	35	132	1.13	46	26,400
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OF LINES

SYMBOL "I"

No. of circuits	Size and material of power cable	Size and material of telephone wire	Size and material of ground cable	Make and style of power insulators	Date work began	Date placed in operation
1	3 B. & S.G. copper	12 B.W.G. galv. iron	None	Vic. 407	.....	1912

SYMBOL "J"

No. of circuits	Size and material of power cable	Size and material of telephone wire	Size and material of ground cable	Make and style of power insulators	Date work began	Date placed in operation
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at distributing stations

1	1/0 B. & S.G. alum.	None	None	8 1/2" x 10"	April, 1914	Nov., 1914
2	1/0 B.&S.G. alum.	None	None	Similar to O.B.	July, 1913	Nov., 1914
1	1/0 B.&S.G. alum.	None	None	No. 9416	July, 1913	Nov., 1914
2	1/0 B.&S.G. alum.	None	None	No. 9416	July, 1913	Nov., 1914
1	1/0 B.&S.G. alum.	None	None	No. 9416	May, 1915	Aug., 1915
1	1/0 B.&S.G. alum.	None	None	No. 9416	Aug., 1915	Oct., 1915
1	1/0 B.&S.G. alum.	None	None	No. 9415	Aug., 1915	Sept., 1915

at junctions

1	2 B.&S.G. bare str'd copper	None	None	C.P. 889	Sept. 24, 1918	Feb. 1, 1919
1	1/0 B.&S.G. alum.	None	None	8 1/2"x10"	May, 1914	Nov., 1914
1	1/0 B.&S.G. alum.	None	None	Similar to O.B.	June, 1913	Nov., 1914
1	1/0 B.&S.G. alum.	None	None	No. 9416	July, 1915	Aug., 1915
1	1/0 B.&S.G. alum.	None	None	No. 9416	Aug., 1915	Sept., 1915

at customers

1	2 B.&S.G.s-r.alum.	None	None	C.P. 889	Sept. 7, 1922	Oct. 25, 1922
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DESCRIPTION  
ONTARIO POWER COMPANY

New section number	Old section number	From	To	Avg. height of poles in feet	Avg. span in feet	Miles	No. of poles	Voltage
A 2 x 71	1 & 2	O.P.Co. trans. sta.....	Niagara River crossing No. 1 Trunk No. 2 Trunk	50' towers 50' towers	550 550	6.01 6.01	73 72	60,000 60,000
15 x 2	22 & 23	T.P.Co. gen. sta.....	O.P. Co. dist. sta.....	40	120	1.13	60	12,000
2 x 264	A. & B.	O.P. Co. dist. sta.....	Jct. 358, A264.....	35	120	6.80	358	12,000
264 x 76	A. & B.	Jct. 358, A264.....	Jct. 419, A276.....	35	120	1.37	61	12,000
276 x 77	A. & B.	Jct. 419, A276.....	Jct. 443, A277.....	35	120	0.53	24	12,000
277 x 19	A. & B.	Jct. 443, A277.....	Ont. Paper Co.....	35	120	0.42	21	12,000
264 x 4	A. & B.	Jct. 358, A264.....	Port Robinson.....	35	120	2.00	122	12,000
*276 x 16	A. & B.	Jct. 419, A276.....	Pilkington Glass Wks.	35	120	0.04	2	12,000
277 x 18	A. & B.	Jct. 443, A277.....	Beaver Board Co.....	35	120	0.04	2	12,000
2 x 261	C. & D.	O.P. Co. dist. sta.....	Jct. 18, A261.....	35	120	0.41	18	12,000
261 x 81	C. & D.	Jct. 18, A261.....	Jct. 76, A281.....	35	120	1.32	58	12,000
270 x 10	C. & D.	Jct. to Ramapo I.W., A270	Ramapo Iron Works..	35	120	0.80	37	12,000
2 x 63	E. & F.	Transformer sta.....	Tie Jct. 12 & 30 k-v., A63	30 & 35	120	13.20	613	30,000
63 x 72	E. & F.	Tie Jct. 12 & 30 k-v., A63	Electro Metals, jct. A72	.....	.....	0.64	.....	30,000
72 x 3	E. & F.	Jct. to Electro Met.A72	Port Colborne sta.....	35	100	5.50	290	30,000
72 x 12	E. & F.	Jct. to Electro Met. A72	Electro Metals Co....	50	120	0.40	1	30,000
272 x 74	G. & H.	Jct. to Elec. Met., A272	Jct. to P.H.Co., A274.	35	120	0.15	11	12,000
273 x 80	G. & H.	Jct. to Can.S.F'y, A273	Jct. to Emp.C.Co.A280	35	120	0.13	6	12,000
63 x 273	G. & H.	Tie Jct. 12 & 30 k-v,A63	Jct. to Can.S.F'y,A273	35	120	0.59	26	12,000
280 x 20	G. & H.	Jct. to Emp.C.Co., A280	Empire Cotton Co....	35	120	1.70	75	12,000
274 x 14	G. & H.	Jct. to P.H. Co., A274	Page Hersey Co.....	35	120	0.20	9	12,000
273 x 13	G. & H.	Jct. to Can.S.F'y., A273	Can. Steel Foundry...	35	120	0.25	18	12,000
272 x 12	G. & H.	Jct. El. M. Co., A272..	Electro Metals Co....	45	120	0.36	16	12,000
274 x 45	G. & H.	Jct. to P.H. Co., A274.	Dain Co. sta.....	35	120	1.29	67	12,000
281 x 72	G. & H.	Jct. to Chippawa, A281	Jct. to El.M.Co., A272	30	120	11.79	519	12,000
	G. & H.	Jct. to Chippawa, A281	Tor. Power Co., tap..	35	120	0.64	28	12,000
280 x 72	G. & H.	Jct. to Emp.C.Co.,A280	Jct. to El.M.Co., A272	35	120	0.25	10	12,000
2 x 268	J. & K.	O.P. Co. dist. sta.....	Jct. to Con.R.Co.A268	35	120	7.52	331	12,000
277 x 17	J. & K.	Con.R.Co. tap, A277 ..	Coniagas Rad. Co....	35	120	0.45	18	12,000
219 x 77	J. & K.	Ontario Paper Co.....	Con.R.Co. tap, A277 ..	50	120	0.13	7	12,000
277 x 63	J. & K.	Con.R.Co. tap, A277 ..	Jct. to Thorold, A263.	35	120	0.90	40	12,000
263 x 38	J. & K.	Jct. to Thorold, A263..	Merritton sta.....	35	120	2.20	110	12,000
2 x 209	L. & M.	O.P. Co. dist. sta.....	Amer. Cyanamide Co.	35	120	2.60	162	12,000
2 x 269	O. & P.	O.P. Co. dist. sta.....	Jct. to Nia. Falls,A269	35	120	1.84	100	12,000
269 x 9	O. & P.	Jct. to Nia. Falls, A269	Amer. Cyanamide Co.	35	120	0.76	41	12,000
2 x 266	R. & S.	O.P. Co. dist. sta.....	Jct. to C.N.P.Co.A266	35	120	0.74	30	12,000
266 x 81	R. & S.	Jct. to C.N.P. Co. A266	Jct. to Chippawa,A281	35	120	0.98	40	12,000
281 x 6	R. & S.	Jct. to Chippawa, A281	Montrose dist. sta....	35	130	1.23	50	12,000
281 x 65	R. & S.	Jct. to Chippawa, A281	Jct. to N.D.Chip.A265	35	120	2.35	103	12,000
265 x 21	R. & S.	Jct. to N.D. Chip., A265	Chippawa.....	35	120	0.15	7	12,000
	R. & S.	Chippawa sta.....	Norton Co.....	35	120	0.22	10	12,000
16 x 266	R. & S.	Can. Nia. Power Co....	Jct. to C.N.P.Co.A266	.....	.....	.....	30	12,000
364 x 34	W. & X.	Jct. to C.Cork Co.,A364	Can. Cork Co.....	40	120	0.12	6	12,000
3 x 364	W. & X.	Port Colborne Sta....	Jct. to C.Cork Co.A364	40	120	0.10	6	12,000
363 x 3	Y. & Z.	Jct. to C.Cem.Co.,A363	Can. Cement Co.....	40	120	1.43	67	12,000
364 x 32	Y. & Z.	Jct. to C.Cork Co.,A364	Gov. Elev. sta.....	.....	.....	1.00	.....	12,000
3 x 363	Y. & Z.	Port Colborne sta.....	Jct. to C.Cem.Co.A363	.....	.....	.....	.....	12,000
2 x 201	.....	O.P. Co. dist. sta.....	H.E.P.C. (cable).....	.....	.....	.....	.....	12,000
2 x 207	.....	O.P. Co. dist. sta.....	Nia. Falls W.W.(cable)	.....	.....	.....	.....	2,200
2 x 211	.....	O.P. Co. dist. sta.....	Q.V.N.F. Park (Table	Rock	House)	.....	.....	2,200

NOTE.—For inter-connected lines at 12,000 volts, see Niagara System, Niagara District—Symbol N1

## OF LINES

## SYMBOL "A"

No. of circuits	Size and material of power cable	Size and material of telephone wire	Size and material of ground cable	Make and style of power insulators	Date work began	Date placed in operation
1	820,000 c.m. alum.	12 B.&S.G. copper	None	Thom 14/0 C.P. 2325 C.P. 1530	1904	July 22, 1906
1*	820,000 c.m. alum.	.....	None	Thom 14/0 C.P. 2325 C.P. 1530	1904	July 22, 1906
2	500,000 c.m. alum.	None	None	Vic. 407	Oct., 1915	Oct., 1915
2	345,000 c.m. alum.	12 B.W.G. galv. iron	None	Vic. 407	.....	Oct. 12, 1906
2	345,000 c.m. alum.	12 B.W.G. galv. iron	None	Vic. 407	.....	.....
2	345,000 c.m. alum.	12 B.W.G. galv. iron	None	Vic. 407	.....	.....
2	345,000 c.m. alum.	12 B.W.G. galv. iron	None	Vic. 407	.....	Dec. 11, 1913
1	3 B.&S.G. copper	12 B.W.G. galv. iron	None	Vic. 407	.....	Oct. 12, 1906
2	3 B.&S.G. copper	12 B.W.G. galv. iron	None	Vic. 407	.....	.....
2	345,000 c.m. alum.	12 B.W.G. galv. iron	None	Vic. 407	.....	Dec. 11, 1913
2	345,000 c.m. alum.	12 B.W.G. galv. iron	None	Vic. 407	.....	Nov. 5, 1910
2	345,000 c.m. alum.	12 B.W.G. galv. iron	None	Vic. 407	.....	Nov., 5, 1910
1	3 B.&S.G. copper	None	None	Vic. 407	.....	July 14, 1907
2	345,000 c.m. alum.	12 B.W.G. galv. iron	None	Vic. 2872	.....	Sept. 28, 1913
2	345,000 c.m. alum.	12 B.W.G. galv. iron	None	Vic. 2872	.....	.....
2	211,950 c.m. alum.	12 B.&S.G. copper	None	Property of	Dept. of Rys. and Canals	.....
2	2/0 B.&S.G. copper	.....	None	Vic. 2872	.....	Nov., 1913
2	3 B.&S.G. copper	12 B.W.G. galv. iron	None	Vic. 407	.....	Aug. 16, 1913
2	345,000 c.m. alum.	12 B.W.G. galv. iron	None	Vic. 407	.....	.....
2	345,000 c.m. alum.	12 B.W.G. galv. iron	None	Vic. 407	.....	.....
2	345,000 c.m. alum.	12 B.W.G. galv. iron	None	Vic. 407	.....	.....
2	173,000 c.m. alum.	12 B.W.G. galv. iron	None	Vic. 407	.....	May 3, 1913
2	3 B.&S.G. copper	12 B.W.G. galv. iron	None	Vic. 407	.....	1911
2	3 B.&S.G. copper	12 B.W.G. galv. iron	None	Vic. 407	.....	1906
2	3 B.&S.G. copper	12 B.W.G. galv. iron	None	Vic. 407	.....	.....
2	1/0 B.&S.G. copper	None	None	Vic. 407	.....	.....
1	173,000 c.m. alum.	12 B.W.G. galv. iron	None	Vic. 407	Oct., 1912	Aug. 16, 1913
2	345,000 c.m. alum.	12 B.W.G. galv. iron	None	Vic. 407	.....	Nov. 5, 1910
2	345,000 c.m. alum.	.....	None	Vic. 407	.....	April 11, 1909
2	345,000 c.m. alum.	12 B.W.G. galv. iron	None	Vic. 407	.....	.....
2	500,000 c.m. alum.	12 B.W.G. galv. iron	None	Vic. 407	.....	Sept. 10, 1912
2	6 B.&S.G. copper	12 B.W.G. galv. iron	None	Vic. 407	.....	May 6, 1908
2	500,000 c.m. alum.	12 B.W.G. galv. iron	None	Vic. 407	.....	Sept. 10, 1912
2	345,000 c.m. alum.	12 B.W.G. galv. iron	None	Vic. 407	.....	May, 6, 1908
2	173,000 c.m. alum.	12 B.W.G. galv. iron	None	Vic. 407	.....	Oct. 6, 1912
2	500,000 c.m. alum.	.....	None	Vic. 407	.....	June 24, 1913
2	500,000 a.m. alum.	.....	None	Vic. 407	.....	Mar. 31, 1914
2	500,000 c.m. alum.	.....	None	Vic. 407	.....	Mar. 31, 1914
2	345,000 c.m. alum.	None	None	Vic. 407	.....	Apr. 11, 1909
2	345,000 c.m. alum.	None	None	Vic. 407	.....	Apr. 11, 1909
2	336,400 c.m. s-r.al.c.	None	None	O.B. 12546	.....	Dec. 8, 1919
2	173,000 c.m. alum.	12 B.W.G. galv. iron	None	Vic. 407	.....	July 5, 1910
2	173,000 c.m. al. & iron	12 B.W.G. galv. iron	None	Vic. 407	.....	July 5, 1910
2	173,000 c.m. alum.	Line not in use and not connected	.....	.....	.....	July 5, 1910
2	Not in use.	.....	None	.....	.....	.....
1	173,000 c.m. alum.	None	None	Vic. 407	.....	Nov. 12, 1911
2	173,000 c.m. alum.	None	None	Vic. 407	.....	Sept. 28, 1913
2	2/0 B.&S.G. copper	12 B.W.G. galv. iron	None	Vic. 407	.....	May 1, 1908
2	173,000 c.m. alum.	Property of Dept. of Rys. and Canals	.....	.....	.....	Sept. 28, 1913
.....	Cables under Welland Canal	.....	.....	.....	.....	.....
2	.....	None	None	.....	.....	.....



## DESCRIPTION

## TORONTO POWER COMPANY—

New section number	Old section number	From	To	Avg. height of poles in feet	Avg. span in feet	Miles	No. of poles	Voltage
Lines terminating								
*1 x 24	.....	Niagara gen. sta.....	Can. Nia. Power Co..	.....	.....	0.23	.....	12
2 x 25	.....	Niagara trans. sta.....	Ont. Power Co.....	45	150	0.19	10	12,000

Lines terminating								
*1 x 2	.....	Niagara gen. sta.....	Niagara trans. sta.....	.....	.....	0.38	.....	12,000
51 x 3	.....	Oxley inter. switch....	Tor. trans. sta.....	53	500	70.00	700	60,000
*50 x 6	.....	Fonthill Inter. switch..	Welland trans. sta....	45	150	7.49	242	60,000
50 x 5	.....	Fonthill Inter. switch..	Thorold trans. sta....	45	150	4.74	172	60,000

Lines terminating								
2 x 50	.....	Niagara trans. sta.....	Fonthill inter. switch	40	340	9.00	140	60,000
2 x 51	.....	Niagara trans. sta.....	Oxley inter. switch....	53	500	9.00	90	60,000
*2 x 3	.....	Niagara trans. sta.....	Tor. trans. sta.....	40	380	79.00	1267	90,000

NOTE.—50 x 6 line carried on steel towers from Fonthill Inter. switch to tower No. 17—0.97 miles, 2 x 3 cables removed between Oxley Inter. switch, and Gages, 29.00 miles. Burlington 1 x 24 underground cables property of Buffalo General Electric Co.  
1 x 2 underground cables, 21 cables of 500,000 c.m. copper.  
For inter-connected lines, see Niagara System, 110,000-volt, steel-tower lines.

## TORONTO

Lines terminating								
368 x 1	.....	Don. Jct., Pole 336....	T.H.E.S., Winchester St	.....	Right of way	only.	.....	.....
*332 x 3	.....	Keele St. dist. sta.....	Tor. Sub. Rly., Islington	40	350	3.50	.....	12,000
364 x 4	.....	Kipling ave. jct. ....	Goodyear Co.....	40	120	3.09	146	12,000
366 x 35	.....	(Bayview jct., 243.....	Can. Wire Co.....	45	120	0.81	36	12,000
.....	.....	C. Wire Co., Pole No. 277	Durant Motor Co.....	45	100	0.13	7	12,000
*3 x 359	.....	Toronto trans. sta.....	Bathurst Arrest. House	.....	.....	.....	.....	12,000

Lines terminating								
*3 x 332	.....	Toronto trans. sta.....	Keele St. dist. sta.....	40	300	3.50	.....	12,000
358 x 32	.....	Campbell Av. Arr. Hse.	Keele St. dist. sta....	45	100	1.05	53	12,000
368 x 38	.....	Don. jct., Pole 336....	Blantyre dist. sta....	45	110	5.54	277	12,000
365 x 40	.....	Eglinton Av. jct. 182..	York Mills dist. sta....	45	100	2.61	144	12,000
340 x 42	.....	York Mills dist. sta....	Bond Lake dist. sta....	45	100	13.09	722	12,000
342 x 46	.....	Bond Lake dist. sta....	Newmarket dist. sta....	45	100	9.22	512	12,000
346 x 49	.....	Newmarket dist. sta....	Keswiche dist. sta....	30	100	14.63	800	12,000
304 x 69	.....	Goodyear Co.....	L.S. Road terminus...	40	100	0.55	30	12,000

NOTE.—\*332 x 3—Towers on this section included in 51 x 3.

\*3 x 359—Underground cable, conduit owned by T.H.E.S.

\*3 x 332—60,000-volt steel-tower line operated at 12,000-volts, Towers included on 51 x 3.



## OF LINES

## SYMBOL "B"—HIGH-TENSION LINES

No. of cir- cuits	Size and material of power cable	Size and material of telephone wire	Size and ma- terial of ground cable	Make and style of power insulators	Date work began	Date placed in operation
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## at customers

duct 3	run 2-cir.115,000 c.m.cop. 1-cir.190,000 c.m.cop.	None	None	C.P. 793		1912 1917
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## at transformer stations

.....	50,000 c.m. copper	48 duct run				1905
2	190,000 c.m. copper	None	$\frac{3}{8}$ " galv. steel	C.P. 1530	1912	1913
1	115,000 c.m. copper	10 B.&S.G. copper	$\frac{3}{8}$ " galv. steel	C.P. 492		1916
1	190,000 c.m. copper	10 B.&S.G. copper	$\frac{3}{8}$ " galv. steel	C.P. 492		1917

## at junctions

2	190,000 c.m. copper	None	$\frac{3}{8}$ " galv. steel	C.P. 492	1904	1905
2	190,000 c.m. copper	10 B.&S.G. copper	$\frac{3}{8}$ " galv. steel	C.P. 1530	1912	1913
2	190,000 c.m. copper	None	$\frac{1}{4}$ " galv. steel	C.P. 492	1905	1906

242 wood poles and 17 steel towers.  
and Islington—26.00 miles.

## DISTRICT

## at customers

1	190,000 c.m. copper	None	$\frac{3}{8}$ " galv. steel	60,000volts C.P. 793		1905
1	190,000 c.m. copper	None	None	C.P. 793		1921
1	115,000 c.m. copper	None	$\frac{3}{8}$ " galv. steel	C.P. 793		1916
1	115,000 c.m. copper	None	$\frac{3}{8}$ " galv. steel	C.P. 793		1922
2	2/0 B.&S.G. copper					1913

## at distributing stations

1	190,000 c.m. copper	None	None	60,000volts C.P. 793		1905
2	115,000 c.m. copper	10 B.&S.G. copper	$\frac{3}{8}$ " galv. steel	C.P. 793		1912
1	115,000 c.m. copper	None	$\frac{3}{8}$ " galv. steel	C.P. 793		1912
1	115,000 c.m. copper	None	None	C.P. 793		1910
1	133,000 c.m. copper	None	None	O.B. 9410		1911
1	133,000 c.m. copper	None	None	O.B. 9410		1911
1	2 B.&S.G.h-d. copper	None	None	O.B. 9410		1911
1	190,000 c.m. copper	None	None	C.P. 793		1921

DESCRIPTION  
TORONTO POWER COMPANY—  
TORONTO

New section number	Old section number	From	To	Avg. height of poles in feet	Avg. span in feet	Miles	No. of poles	Voltage
<b>Lines terminating</b>								
B. *303 x 64	.....	Tor.Sub.Rly.Islington..	Kipling ave. jct.....	40	300	1.00	.....	12,000
359 x 65	.....	Bathurst Arrest. House.	Eglinton ave. jct. 182.	45	100	3.39	182	12,000
365 x 66	.....	Eglinton ave. jct. 182...	Bayview jct. 243.....	45	100	1.29	61	12,000
366 x 68	.....	Bayview jct. 243.....	Don. jct. 336.....	45	110	1.76	94	12,000

NOTE.—303 x 64—Towers on this section included in 51 x 3, 60 k-v. steel-tower line operated at 1

**THOROLD**

<b>Lines terminating</b>								
*5 x 503	.....	Thorold trans. sta.....	Nia. St. C. & Tor. Rly.	45	100	0.49	26	12,000
5 x 501	.....	Thorold trans. sta.....	Exolon Co.....	40	125	0.15	8	12,000
*5 x 502	.....	Thorold trans. sta.....	Riordon Co.....	45	150	2.05	80	12,000
502 x 6	.....	Riordon Co.....	Inter-Lake Tissue Mills	40	150	0.62	20	12,000
564 x 5	.....	Ont. Paper Co. inter. sw.	Beaver Board Co.....	45	125	0.80	41	12,000
*564 x 4	.....	Ont. Paper Co. inter. sw.	Ont. Paper Co.....	.....	.....	.....	.....	12,000

**Lines terminating**

5 x 564	.....	Thorold trans. sta.....	Ont. Paper Co. inter sw.	40	150	1.25	50	12,000
263 x 564	.....	Mitchell inter. switch..	Ont. Paper Co. inter sw.	40	150	4.98	192	12,000

NOTE.—\*5 x 502—1-circuit 190,000 c.m. copper to pole No. 26, and 1-circuit 115,000 c.m. copper

\*5 x 503—Line carried on Niagara St. C. and Toronto Rly. poles on railway right-of-way.

\*564 x 4—Underground cables.

**NIAGARA**

<b>Lines terminating</b>								
*2 x 202	.....	Niagara trans. sta.....	Norton Co.....	45	150	1.98	75	12,000
*263 x 3	.....	Mitchell inter. switch..	{ Nia. St. C. & Tor. Rly.. Nia. Falls & Nat. A. Co.	45	150	1.92	74	12,000
*2 x 201	.....	Niagara trans. sta.....	Aloxite Co.....	45	125	0.59	26	12,000

**Lines terminating**

2 x 263	.....	Niagara trans. sta.....	Mitchell inter. switch.	40	175	3.74	127	12,000
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NOTE.—\*263 x 3, 1-circuit of 190,000 c.m. copper to National Abrasive Co. and 1-circuit of \*2 x 201, carried on own poles from Niagara trans. sta. to pole No. 9 = 0.22 miles, then on Total, 0.59 miles.

\*2 x 202, owned by Norton Co., vested by Toronto Power Co.

**WELLAND**

<b>Lines terminating</b>								
6 x 601	73A	Welland trans. sta.....	Electro Metals Co....	45	100	0.42	20	12,000
6 x 601	71 & 72	Welland trans. sta.....	Electro Metals Co....	45	125	0.35	17	12,000

## OF LINES

## SYMBOL "B"—Continued

## DISTRICT—Continued

No. of circuits	Size and material of power cable	Size and material of telephone wire	Size and material of ground cable	Make and style of power insulators	Date work began	Date placed in operation
<b>at junctions</b>						
1	190,000 c.m. copper	None	$\frac{3}{8}$ " galv. steel	60,000volts { C.P. 793	.....	1905
2	115,000 c.m. copper	None	$\frac{3}{8}$ " galv. steel	C.P. 793	.....	1910
1	115,000 c.m. copper	None	$\frac{3}{8}$ " galv. steel	C.P. 793	.....	1912
1	115,000 c.m. copper	None	$\frac{3}{8}$ " galv. steel	C.P. 793	.....	1912

2 kv.

## DISTRICT

## at customers

1	115,000 c.m. copper	10 B.&S.G. copper	None	C.P. 793	.....	1917
1	115,000 c.m. copper	10 B.&S.G. copper	$\frac{3}{8}$ " galv. steel	C.P. 793	.....	1917
1	190,000 c.m. copper	10 B.&S.G. copper	$\frac{3}{8}$ " galv. steel	C.P. 793	.....	1917
1	115,000 c.m. copper	10 B.&S.G. copper	$\frac{3}{8}$ " galv. steel	C.P. 793	.....	1917
2	190,000 c.m. copper	10 B.&S.G. copper	$\frac{3}{8}$ " galv. steel	C.P. 793	.....	1918

## at junctions

2	190,000 c.m. copper	10 B.&S.G. copper	$\frac{3}{8}$ " galv. steel	C.P. 793	.....	1917
2	190,000 c.m. copper	10 B.&S.G. copper	$\frac{3}{8}$ " galv. steel	C.P. 793	.....	1917

from pole No. 26 to Riordon Co.

## DISTRICT

## at customers

1	190,000 c.m. copper	None	$\frac{3}{8}$ " galv. steel	C.P. 793	.....	1917
2	1-cir. 190,000c.m.cop.	14 B.&S.G.c-c.steel	None	C.P. 793	.....	1918
1	1-cir. 115,000c.m.cop.	None	$\frac{3}{8}$ " galv. steel	C.P. 793	.....	1917

## at junctions

2	190,000 c.m. copper	10 B.&S.G. copper	$\frac{3}{8}$ " galv. steel	C.P. 793	.....	1918
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115,000 c.m. copper to Niagara, St. C. and Toronto Rly.

Can. Niagara Power Co. poles No. 10 to 23 = 0.29 miles, then on own poles from No. 24 to 26 = 0.08 miles.

## DISTRICT

## at customers

1	190,000 c.m. copper	None	None	C.P. 793	.....	1916
2	190,000 c.m. copper	10 B.&S.G. copper	None	C.P. 793	.....	1916



DESCRIPTION  
SEVERN SYSTEM—

New section number	Old section number	From	To	Avg. height of poles in feet	Avg. span in feet	Miles	No. of poles	Voltage
<b>Lines terminating</b>								
S. 51 x 1	S.L. .....	Pole No. 586, S51.....	Midland dist. sta.....	40	100	2.40	117	22,000
1 x 2	17	Midland dist. sta.....	Penetang dist. sta.....	40	120	3.03	143	22,000
72 x 4	22	Pole No. 1590, S72....	Barrie dist. sta.....	40	120	1.57	64	22,000
60 x 5	9	Pole No. 1786, S60....	Collingwood dist. sta..	40	120	12.04	525	22,000
56 x 6	2	Pole No. 193, S56.....	Coldwater dist. sta....	40	120	1.16	55	22,000
57 x 7	4	Pole No. 903, S57.....	Elmvale dist. sta.....	40	120	0.42	19	22,000
20 x 9	23	Big Chute gen. sta.....	Swift Rapid gen. sta..	30	120	7.50	328	22,000
60 x 10	8	Pole No. 1786, S60....	Stayner dist. sta.....	40	120	1.50	69	22,000
69 x 19	13	Pole No. 188, S69.....	Victoria Harbor dist. sta.	40	120	1.52	82	22,000
71 x 21	20	Pole No. 401, S71.....	C.P.R. elev. dist. sta..	35	125	1.33	58	22,000
72 x 22	21	Pole No. 1590, S72....	Camp Borden dist. sta	35	132	14.76	604	22,000
84 x 32	29	Pole No. 2701, S84....	Alliston dist. sta.....	40	125	1.82	86	22,000
83 x 33	32	Pole No. 2984, S83....	Beeton dist. sta.....	40	125	1.76	84	22,000
83 x 34	31	Pole No. 2984, S83....	Tottenham dist. sta....	40	125	3.61	177	22,000
87 x 35	27	Pole No. 2282, S87....	Cookstown dist. sta....	40	125	2.24	98	22,000
86 x 36	35	Pole No. 2021, S86....	Thornton dist. sta....	40	125	1.85	81	22,000
62 x 37	34	Pole No. 2451, S62....	Bradford dist. sta.....	40	125	7.25	319	22,000
51 x 11	.....	Pole No. 586, S51.....	Tiffin Elev. dist. sta....	40	125	0.41	17	22,000
<b>Lines terminating</b>								
10 x 1002	10	Stayner dist. sta.....	Creemore.....	35	120	7.68	347	4,000
<b>Lines terminating</b>								
20 x 52	11	Big Chute gen. sta.....	Waubashene sw. sta.	35	120	12.00	<sup>504</sup> 527	22,000
57 x 54	5	Pole No. 903, S57.....	Pole No. 1110, S54...	40	120	4.57	207	22,000
52 x 56	1	Waubashene sw. sta..	Pole No. 193, S56....	40	120	3.68	163	22,000
56 x 57	3	Pole No. 193, S56.....	Pole No. 903, S57....	40	120	15.86	711	22,000
54 x 60	7	Pole No. 1110, S54....	Pole No. 1786, S60...	40	120	15.07	676	22,000
4 x 61	24	Barrie dist. sta.....	Pole No. 1834, S61...	40	125	3.88	180	22,000
87 x 62	33	Pole No. 2282, S87....	Pole No. 2451, S62...	40	125	3.87	169	22,000
71 x 67	19	Pole No. 401, S71.....	Pole No. 431, S67....	35	100	0.56	30	22,000
52 x 69	12	Waubashene sw. sta..	Pole No. 188, S69....	40	100	3.59	188	22,000
69 x 71	14	Pole No. 188, S69.....	Pole No. 401, S71....	40	100	4.03	213	22,000
54 x 72	6	Pole No. 1110, S54....	Pole No. 1590, S72...	40	120	10.76	480	22,000
84 x 83	30	Pole No. 2701, S84....	Pole No. 2984, S83...	40	125	6.30	283	22,000
35 x 84	28	Cookstown dist. sta....	Pole No. 2701, S84....	40	125	7.35	321	22,000
61 x 86	25	Pole No. 1834, S61....	Pole No. 2021, S86....	40	125	4.28	187	22,000
86 x 87	26	Pole No. 2021, S86....	Pole No. 2282, S87....	40	125	5.99	261	22,000
67 x 51	16	Pole No. 431, S67.....	Pole No. 586, S51....	40	100	2.90	155	22,000

OF LINES

SYMBOL "S"

No. of circuits	Size and material of power cable	Size and material of telephone wire	Size and material of ground cable	Make and style of power insulators	Date work began	Date placed in operation
at stations						
2	1-cir.2/0B.&S.G. al. 1-cir.1/0B.&S.G.s-r. alum.	1-cir.12B.W.G. galv iron. 1-cir.10B.&S.G. c-c. steel	1/4" galv. steel	{C.P. 889 Pittsburg	April 11, 1917	May 22, 1917
2	2 B.&S.G. std.copper	10 B.&S.G.c-c. steel	1/4" galv. stee	C.P. 889	June 7, 1911	July 18, 1911
2	2/0 B.&S.G. alum..	10 B.&S.G.c-c. steel	1/4" galv. steel	Thom 2111	Nov. 6, 1912	April 6, 1913
2	3/0 B.&S.G. alum.	10 B.&S.G.c-c. steel	1/4" galv. steel	{C.P. 889 Thom 2111	Nov. 1, 1912	Feb. 24, 1913
1	2 B.&S.G. alum.	10 B.&S.G. c-c.steel	1/4" galv. steel	Thom 2111	Sept. 20, 1912	Feb. 24, 1913
1	2 B.&S.G. alum.	10 B.&S.G.c-c. steel	1/4" galv. steel	Thom 2111	Feb. 1, 1913	May 27, 1913
1	2 B.&S.G. alum.	10 B.&S.G. copper	5/16" galv. steel	O.B. 9410	.....	.....
1	2 B.&S.G. alum.	10 B.&S.G. c-c.steel	1/4" galv. steel	Thom 2111	Jan. 24, 1913	Feb. 25, 1913
1	2 B.&S.G. alum.	12 B.W.G.galv.iron	1/4" galv. steel	{C.P. 188 Pittsburg	.....	.....
2	1/0 B.&S.G. alum.	9 B.W.G. galv. iron	1/4" galv. steel	O.B. 12547	Feb. 29, 1916	July 24, 1916
1	6 B.&S.G. m.h-d. copper	9 B.W.G. galv. iron	6 B.W.G.galv.iron	C.P. 136	May 30, 1916	June 29, 1916
1	125,000 c.m.s-r.alum	9 B.W.G. galv. iron	9/32" galv. steel	C.P. 889	Dec. 8, 1917	May 23, 1918
1	5/16" galv. steel	9 B.W.G. galv. iron	9/32" galv. steel	C.P. 889	Feb. 28, 1918	July 26, 1918
1	5/16" galv. steel	9 B.W.G. galv. iron	9/32" galv. steel	C.P. 889	Jan. 30, 1918	Sept. 9, 1918
1	125,000 c.m.s-r.alum	9 B.W.G. galv. iron	1/4" galv. steel	C.P. 889	Nov. 8, 1917	April 25, 1918
1	5/16" galv. steel	9 B.W.G. galv. iron	9/32" galv. steel	C.P. 889	June 15, 1918	Oct. 16, 1918
1	5/16" galv. steel	9 B.W.G. galv. iron	9/32" galv. steel	C.P. 889	Mar. 19, 1918	Sept. 16, 1918
2	2 B.&S.G. s-r. alum	9 B.W.G. galv. iron	5/16" galv. steel	C.P. 889	Aug. 25, 1922	Sept. 15, 1922

at customers

1	1/0 B.&S.G. alum.	None	1/4" galv. steel	P. 2822	Aug. 15, 1914	Oct. 21, 1914
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at junctions

2	4/0 B.&S.G. alum.	9 B.W.G.galv.iron	1/4" galv. steel	Thom 2111	.....	1915
2	4/0 B.&S.G. s-r. al.	12 B.W.G.galv.iron				
2	4/0 B.&S.G. alum.	9 B.W.G.galv.iron				
2	4/0 B.&S.G. alum.	10 B.&S.G.c-c. steel	1/4" galv. steel	Thom 2111	Oct. 20, 1912	Feb. 24, 1913
2	4/0 B.&S.G. alum.	9 B.W.G.galv.iron				
2	4/0 B.&S.G. alum.	10 B.&S.G.c-c. steel	1/4" galv. steel	Thom 2111	Sept. 20, 1912	Feb. 24, 1913
2	4/0 B.&S.G. alum.	9 B.W.G.galv.iron				
2	4/0 B.&S.G. alum.	10 B.&S.G.c-c. steel	1/4" galv. steel	Thom 2111	Sept. 25, 1912	Feb. 24, 1913
2	3/0 B.&S.G. alum.	10 B.&S.G.c-c. steel	1/4" galv. steel	{C.P. 889 Thom 2111	Oct. 23, 1912	Feb. 24, 1913
1	125,000 c.m.s-r.alum	9 B.W.G.galv.iron	1/4" galv. steel	C.P. 889	Sept. 13, 1917	April 25, 1918
1	5/16" galv. steel	9 B.W.G.galv.iron	9/32" galv. steel	C.P. 889	May 29, 1918	Sept. 16, 1918
2	2/0 B.&S.G. alum.	12 B.W.G.galv.iron	.....	Pittsburg	.....	.....
2	1/0 B.&S.G. s-r.alum			O.B. 12547	.....	.....
2	1/0 B.&S.G. s-r.alum	12 B.W.G.galv.iron	.....	Pittsburg	April 1, 1916	July 24, 1916
2	2/0 B.&S.G. alum.			O.B. 12547	.....	.....
2	2/0 B.&S.G. alum.	12 B.W.G.galv.iron	.....	C.P. 133	Mar. 7, 1916	July 24, 1916
2	1/0 B.&S.G. s-r.alum			Pittsburg	.....	.....
2	2/0 B.&S.G. alum.	10 B.&S.G.c-c. steel	1/4" galv. steel	Thom 2111	Nov. 6, 1912	April 6, 1913
1	5/16" galv. steel	9 B.W.G.galv.iron	9/32" galv. steel	C.P. 889	Jan. 2, 1918	July 26, 1918
1	125,000 c.m.s-r.alum	9 B.W.G.galv.iron	1/4" galv. steel	C.P. 889	Nov. 16, 1917	May 23, 1918
1	125,000 c.m.s-r.alum	9 B.W.G.galv.iron	1/4" galv. steel	C.P. 889	Oct. 6, 1917	April 25, 1918
1	125,000 c.m.s-r.alum	9 B.W.G.galv.iron	1/4" galv. steel	C.P. 889	Oct. 20, 1917	April 25, 1918
2	1-cir.2/0B.&S.G. al. 1-cir.1/0 B.&S.G. s-r. alum.	1-cir.12 B.W.G. galv. iron 1-cir.10 B.&S.G. c-c. steel	1/4" galv. steel	{C.P. 889 Pittsburg	April 11, 1917	May 22, 1917

DESCRIPTION  
EUGENIA SYSTEM—

New section number	Old section number	From	To	Avg. height of poles in feet	Avg. span in feet	Miles	No. of poles	Volt- age
Lines terminating								
E.	E.F.L.							
57 x 29	.....	Pole No. 1007.....	Dur. Russill dist. sta...	35	.....	0.05	2	22,000
65 x 2	2	Pole No. 1141A, E65 ..	Owen Sound dist. sta..	40	125	5.28	227	22,000
52 x 3	1	Pole No. 316, E52.....	Chatsworth dist. sta. .	40	125	15.27	658	22,000
17 x 4	8	Elmwood dist. sta. ....	Chesley dist. sta.....	40	125	6.07	259	22,000
55 x 5	9	Pole No. 297, E55.....	Dundalk dist. sta.....	40	125	11.44	499	22,000
57 x 7	4	Pole No. 971, E57.....	Durham dist. sta.....	40	125	0.17	14	22,000
54 x 8	11	Pole No. 1491, E54....	Hanover dist. sta.....	40	125	0.76	33	22,000
59 x 9	5	Pole No. 1326, E59....	Mt. Forest dist. sta...	40	125	7.49	336	22,000
5 x 10	10	Dundalk dist. sta.....	Shelburne dist. sta....	40	125	13.12	565	22,000
64 x 11	20	Pole No. 187, E64.....	Collingwood dist. sta..	35	125	20.17	883	22,000
62 x 12	17	Pole No. 1987, E62....	Orangeville dist. sta...	30	130	0.36	21	22,000
63 x 13	6	Pole No. 1798, E63....	Grand Valley dist. sta.	35	132	8.98	384	22,000
65 x 15	15	Pole No. 1141A, E65 ..	Kilsyth dist. sta.....	40	125	4.80	206	22,000
54 x 17	8	Pole No. 1491, E54.....	Elmwood dist. sta.....	40	125	4.99	214	22,000
55 x 18	4	Dundalk, Pole 297, E55	Priceville dist. sta.....	40	125	5.71	243	22,000
74 x 25	.....	Kinloss No. 2393, E74.	Kincardine dist. sta....	35	132	12.71	517	40,000
74 x 24	.....	Kinloss No. 2393, E74.	Holyrood dist. sta. ....	35	132	6.20	224	40,000
72 x 22	.....	Wingham No. 2759, E72	Wingham dist. sta.....	35	132	4.11	170	40,000
71 x 21	.....	Teeswater, No. 2172, E71	Teeswater dist. sta.....	35	132	7.01	284	40,000
76 x 26	.....	Walkerton Quarry, 1977 E76	Walkerton Quarry sta.	35	132	0.25	12	40,000
30 x 31	.....	Harriston dist. sta.....	Mt. Forest dist. sta...	35	175	10.54	331	26,400
Lines terminating								
1 x 52	1	Eugenia gen. sta.....	Pole No. 316, E52....	40	125	7.28	316	22,000
58 x 54	7	Pole No. 964, E58.....	Pole No. 1491, E54....	40	125	12.11	527	22,000
1 x 55	3	Eugenia gen. sta.....	Pole No. 297, E55....	40	125	6.78	297	22,000
57 x 29	5	Pole No. 971, E57.....	Pole No. 1007, E29....	40	125	0.84	36	22,000
58 x 57	4	Pole No. 964, E58.....	Pole No. 971, E57....	40	125	0.12	7	22,000
18 x 58	4	Priceville dist. sta.....	Pole No. 964, E58....	40	125	9.97	423	22,000
29 x 59	5	Pole No. 1007, E29....	Pole No. 1326, E59....	40	125	7.36	319	22,000
10 x 60	17	Shelburne dist. sta.....	Pole No. 1380, E60....	30	130	0.40	21	22,000
63 x 62	17	Pole No. 1798, E63....	Pole No. 1987, E62....	30	130	4.44	189	22,000
60 x 63	17	Pole No. 1380, E60....	Pole No. 1798, E63....	30	130	10.20	418	22,000
1 x 64	19	Eugenia gen. sta.....	Pole No. 187, E64....	35	125	4.04	187	22,000
3 x 65	2	Chatsworth dist. sta. .	Pole No. 1141A, E65 ..	40	125	3.92	168	22,000
8 x 70	.....	Hanover dist. sta.....	Pole No. 1822, E70....	40	132	7.27	297	40,000
76 x 71	.....	Pole No. 1977, E76....	Pole No. 2172, E71....	40	132	4.84	195	40,000
21 x 72	.....	Teeswater dist. sta.....	Pole No. 2758, E72....	35	132	7.53	303	40,000
71 x 74	.....	Pole No. 2172, E71....	Pole No. 2393, E74....	35	132	5.51	222	40,000
70 x 76	.....	Walkerton, pole No. 1822, E70	Pole No. 1977, E76....	40	132	3.81	155	40,000
8 x 863	26	Hanover dist. sta.....	Pole No. 161, E863....	30	132	2.73	161	4,000

NOTE.—For inter-connected lines see Niagara System—Stratford District—Symbol "N8."



## OF LINES

## SYMBOL "E"

No. of circuits	Size and material of power cable	Size and material of telephone wire	Size and material of ground cable	Make and style of power insulators	Date work began	Date placed in operation
at stations						
2	3/0 B.&S.G. alum.	9 B.W.G.galv.iron	9/32" galv. steel	C.P. 889	April 28, 1922	April 30, 1922
2	3/0 B.&S.G. alum.	9 B.W.G.galv.iron	1/4" galv. steel	C.P. 133	April 7, 1915	Nov. 18, 1915
2	3/0 B.&S.G. alum.	9 B.W.G.galv.iron	1/4" galv. steel	C.P. 133	Mar. 17, 1915	Nov. 18, 1915
1	3/0 B.&S.G. alum.	9 B.W.G.galv.iron	1/4" galv. steel	C.P. 133	Dec. 4, 1915	June 18, 1916
1	1/0 B.&S.G. alum.	9 B.W.G.galv.iron	1/4" galv. steel	C.P. 133	May 20, 1915	Nov. 18, 1915
2	3/0 B.&S.G. alum.	6 B.&S.G. s-r. alum	1/4" galv. steel	C.P. 133	April 13, 1915	Nov. 18, 1915
3	1-1/0 B.&S.G.s-r.al.	9 B.W.G.galv.iron				
2	2-3/0 B.&S.G.s-r.al.	6 B.&S.G. s-r. alum	1/4" galv. steel	C.P. 133	Aug. 18, 1916	Sept. 16, 1916
	1-3/0 B.&S.G. alum.					
	1-5/16" steel	6 B.&S.G.s-r.alum.	1/4" galv. steel	C.P. 133	April 26, 1915	Nov. 18, 1915
1	1/0 B.&S.G. alum.	9 B.W.G.galv. iron	1/4" galv. steel	C.P. 133	June 9, 1915	Nov. 18, 1915
1	1/0 B.&S.G. copper	9 B.W.G. galv. iron	1/4" galv. steel	C.P. 889	Aug. 14, 1916	Oct. 6, 1916
1	6 B.&S.G. copper	10 B.W.G.galv.iron		C.P. 889		
				& special	Built by P.R. Devel. Co.	
1	6 B.&S.G. m-h-d. copper	9 B.W.G.galv. iron	1/4" galv. steel	C.P. 889	July 21, 1916	Dec. 1, 1916
1	6 B.W.G. galv. iron	9 B.W.G.galv.iron	1/4" galv. steel	C.P. 889	Nov. 7, 1916	Jan. 1, 1918
1	3/0 B.&S.G. alum.	9 B.W.G.galv. iron	1/4" galv. steel	C.P. 133	Dec. 4, 1915	June 18, 1916
2	3/0 B.&S.G. alum.	6 B.&S.G. s-r. alum	1/4" galv. steel	C.P. 133	April 13, 1915	Nov. 18, 1915
1	1/0 B.&S.G.s-r.alum.	6 B.&S.G. s-r. alum	5/16" galv. steel	C.P. 1162	Aug. 11, 1920	Jan. 11, 1921
1	5/16" galv. steel	9 B.W.G. galv. iron	5/16" galv. steel	C.P. 1162	Sept. 13, 1920	Jan. 11, 1921
1	1/0 B.&S.G.s-r.alum.	6 B.&S.G. s-r. alum	5/16" galv. steel	C.P. 1162	Oct. 14, 1920	Dec. 21, 1920
1	1/0 B.&S.G.s-r.alum.	6 B.&S.G. s-r. alum	5/16" galv. steel	C.P. 1162	May 27, 1920	Dec. 19, 1920
1	2 B.&S.G.S.R. alum.	9 B.W.G. galv. iron	4 x 12 galv. steel	C.P. 1162	Dec. 1, 1920	Feb. 2, 1921
1	1/0B.&S.G.s-r.alum.	6 B.&S.G.s-r.alum.	None	C.P. 889	June 9, 1923	Oct. 11, 1923

## at junctions

2	3/0 B.&S.G. alum.	9 B.W.G. galv. iron	1/4" galv. steel	C.P. 133	Mar. 17, 1915	Nov. 18, 1915
2	1-3/0 B.&S.G. s-r. al.	6 B.&S.G.s-r. alum.	1/4" galv. steel	C.P. 133	Oct. 19, 1915	June 18, 1916
2	1-3/0 B.&S.G. alum.					
2	3/0 B.&S.G. alum.	9 B.W.G. galv. iron	1/4" galv. steel	C.P. 133	April 10, 1915	Nov. 18, 1915
2	1-3/0 B.&S.G. alum.					
	1-5/16" steel	6 B.&S.G. s-r. alum.	1/4" galv. steel	C.P. 133	April 26, 1915	Nov. 18, 1915
2	3/0 B.&S.G. alum.	6 B.&S.G. s-r. alum.	1/4" galv. steel	C.P. 133	April 13, 1915	Nov. 18, 1915
2	3/0 B.&S.G. alum.	6 B.&S.G. s-r. alum.	1/4" galv. steel	C.P. 133	April 13, 1915	Nov. 18, 1915
2	1-3/0 B.&S.G. alum.					
	1-5/16" steel	6 B.&S.G. s-r. alum.	1/4" galv. steel	C.P. 133	April 26, 1915	Nov. 18, 1915
1	6 B.&S.G. copper	10 B.W.G.galv.iron		C.P. 889		
				& special	Built by P.R. Devel. Co.	
1	6 B.&S.G. copper	10 B.W.G.galv.iron		C.P. 889		
				& special	Built by P.R. Devel. Co.	
1	6 B.&S.G. copper	10 B.W.G.galv.iron		C.P. 889		
				& special	Built by P.R. Devel. Co.	
1	1/0 B.&S.G. copper	9 B.W.G. galv. iron	1/4" galv. steel	C.P. 889	Aug. 21, 1916	Oct. 6, 1916
2	3/0 B.&S.G. alum.	9 B.W.G. galv. iron	1/4" galv. steel	C.P. 133	April 7, 1915	Nov. 18, 1915
1	1/0 B.&S.G.s-r. alum	6 B.&S.G. s-r. alum	5/16" galv. steel	C.P. 889	May 22, 1920	Dec. 19, 1920
1	1/0 B.&S.G.s-r. alum	6 B.&S.G. s-r.alum	5/16" galv. steel	C.P. 889	June 8, 1920	Dec. 19, 1920
				C.P. 1162		
1	1/0 B.&S.G.s-r. alum	6 B.&S.G. s-r. alum	5/16" galv. steel	C.P. 1162	July 9, 1920	Dec. 21, 1920
1	1/0 B.&S.G.s-r. alum	6 B.&S.G. s-r. alum	5/16" galv. steel	C.P. 1162	July 30, 1920	Jan. 11, 1921
1	1/0 B.&S.G.s-r. alum	6 B.&S.G. s-r. alum	5/16" galv. steel	C.P. 889		
				C.P. 1162		
1	3/0 B.&S.G.s-r. alum	None	6 B.W.G.galv.iron	C.P. 105	June 8, 1920	Dec. 19, 1920
					Nov. 1, 1917	Dec. 12, 1917

DESCRIPTION

EUGENIA SYSTEM—

New section number	Old section number	From	To	Avg. height of poles in feet	Avg. span in feet	Miles	No. of poles	Volt- age
Lines terminating								
E.	E.F.L.							
1 x 101	12	Eugenia gen. sta.....	Markdale.....			7.28		4,000
1 x 102	13	Eugenia gen. sta.....	Flesherton.....			6.78		4,000
7 x 702	14	Durham dist. sta.....	Holstein.....	30	130	2.63	96	4,000
863 x 2	28	Pole No. 161, E863....	Neustadt.....	30	132	2.36	96	4,000
863 x 3	27	Pole No. 161, E863....	Carlsruhe.....	30	132	1.22	57	4,000
60 x 1002	18	Pole No. 1380, E60....	Horning's Mills.....	30	130	5.53	234	4,000
12x1202	21	Orangeville dist. sta....	Alton's Foundry.....	30	132	5.75	249	4,000
13x1302	22	Grand Valley dist. sta..	Arthur.....	30	120	12.36	531	4,000
15x1501	16	Kilsyth dist. sta.....	Tara.....	40	125	6.80	291	4,000
24x2402	.....	Holyrood dist. sta.....	Lucknow.....	30	150	4.76	170	4,000
24x2403	.....	Holyrood dist. sta.....	Ripley.....	30	150	6.14	218	4,000
4 x 402	.....	Chesley dist. sta.....	Paisley.....	30	160	10.70	362	4,000

## OF LINES

## SYMBOL "E"—Continued

No. of cir- cuits	Size and material of power cable	Size and material of telephone wire	Size and ma- terial of ground cable	Make and style of power insulators	Date work began	Date placed in operation
at customers						
1	2 B.&S.G. s-r.alum.	None	None	O.B. 9403	Dec. 28, 1915	Feb. 8, 1916
1	2 B.&S.G. s-r.alum.	None	None	O.B. 9403	June 4, 1915	Nov. 18, 1915
1	2 B.&S.G. s-r.alum.	None	1/4" galv. steel	O.B. 9403	Dec. 10, 1915	April 3, 1916
1	3/0 B.&S.G. s-r.alum.	None	6 B.W.G.galv.iron	C.P. 105	Oct. 10, 1918	Nov. 17, 1918
1	6 B.&S.G.m.h-d.cop.	None	6 B.W.G.galv.iron	C.P. 505	Sept. 26, 1918	Nov. 17, 1918
1	6 B.&S.G.m.h-d.cop.	None	10 B.W.G.galv.ir.	.....	Built by P.R.	Devel. Co.
1	4 B.&S.G.m.h-d.cop.	None	6 B.W.G.galv.iron	O.B. 9403	Oct. 17, 1916	Nov. 27, 1916
1	4 B.&S.G.m.h-d.cop.	None	6 B.W.G.galv.iron	O.B. 9403	Oct. 30, 1916	Feb. 19, 1917
1	6 B.&S.G.m.h-d.cop.	9 B.W.G.galv.iron.	1/4" galv. steel	{ C.P. 259 Brown	Oct. 12, 1916	Jan. 1, 1918
1	2 B.&S.G. s-r.alum.	None	1/4" galv. steel	C.P. 505	Sept. 22, 1920	Jan. 11, 1921
1	2 B.&S.G. s-r.alum.	None	1/4" galv. steel	C.P. 505	Nov. 5, 1920	Jan. 12, 1921
1	4 B.&S.G.s-r.alum.	None	1/4" galv. steel	C.P. 105	May 29, 1923	Aug. 13, 1923



DESCRIPTION  
WASDELLS SYSTEM—

New section number	Old section number	From	To	Avg. height of poles in feet	Avg. span in feet	Miles	No. of poles	Volt- age
Lines terminating								
W. 52 x 2	W.L. 2	Pole No. 1203, W52...	Beaverton dist. sta....	40	120	1.49	70	22,000
53 x 3	3	Pole No. 1559, W53...	Cannington dist. sta. .	40	120	1.86	86	22,000
54 x 4	8	Pole No. 183, W54....	Severn Sys. (Longford)	35	132	6.41	267	22,000
56 x 6	.....	Pole No. 1011, W56...	Kirkfield dist. sta....	35	150	11.34	412	22,000
3 x 9	.....	Cannington dist. sta...	Pinedale dist. sta.....	35	175	7.60	205	22,000
9 x 7	.....	Pinedale dist. sta.....	Greenbank dist. sta...	35	175	8.41	258	22,000

Lines terminating

54 x 51	1	Pole No. 183, W54....	Pole No. 832, W51. .	40	120	14.34	649	22,000
56 x 52	1	Pole No. 1011, W56...	Pole No. 1203, W52 ..	40	120	4.32	193	22,000
57 x 53	3	Pole No. 1408, W57. .	Pole No. 1559, W53...	40	120	3.34	151	22,000
1 x 54	1 & 1A	Wasdells Falls gen. sta.	Pole No. 183, W54. .	40	120	3.94	183	22,000
51 x 56	1	Pole No. 832, W51.....	Pole No. 1011, W56...	40	120	3.93	178	22,000
52 x 57	3	Pole No. 1203, W52...	Pole No. 1408, W57...	40	120	4.47	205	22,000
7 x 761	.....	Greenbank dist. sta....	Jct. W761.....	30	160	1.75	76	4,000

Lines terminating

2 x 202	4	Beaverton dist. sta....	Gamebridge.....	.....	.....	5.81	.....	4,000
202 x 3	5	Gamebridge.....	Brechin.....	.....	.....	3.93	.....	4,000
3 x 302	6	Cannington dist. sta. .	Woodville.....	30	120	5.15	148	4,000
3 x 303	7	Cannington dist. sta. .	Sunderland.....	30	120	7.40	335	4,000
6 x 602	.....	Kirkfield dist. sta....	Kirkfield.....	.....	.....	1.01	.....	4,000
761 x 1	.....	Jct. W761.....	Uxbridge.....	30	160	5.75	208	4,000
761 x 2	.....	Jct. W761.....	Port Perry.....	30	160	4.00	139	4,000

NOTE.—W3 x 9. This line carried on W3 x 303 poles from Cannington dist. sta. to Pole No. 39

MUSKOKA SYSTEM—

New section number	Old section number	From	To	Avg. height of poles in feet	Avg. span in feet	Miles	No. of poles	Volt- age
Lines terminating								
M. 1 x 2	M.L. 1	South Falls gen. sta....	Huntsville dist. sta....	35	132	26.32	1,141	22,000

## OF LINES

## SYMBOL "W"

No. of circuits	Size and material of power cable	Size and material of telephone wire	Size and material of ground cable	Make and style of power insulators	Date work began	Date placed in operation
at stations						
1	1/4" galv. steel	10 B.&S.G. c-c. steel	1/4" galv. steel	C.P. 136	Mar. 30, 1914	Sept. 28, 1914
1	1/4" galv. steel	10 B.&S.G. c-c. steel	1/4" galv. steel	C.P. 136	Feb. 18, 1914	Sept. 28, 1914
1	1/0 B.&S.G. alum.	9 B.W.G. galv. iron	1/4" galv. steel	C.P. 136	Feb. 17, 1916	June 4, 1916
1	2 B.&S.G.s-r. alum.	6 B.&S.G.s-r. alum.	9/32" galv. steel	O.B. 12546	Feb. 10, 1920	April 22, 1920
1	5/16" galv. steel	9 B.W.G. galv. iron	None	C.P. 133	June 21, 1922	Sept. 29, 1922
1	5/16" galv. steel	9 B.W.G. galv. iron	None	C.P. 133	June 21, 1922	Sept. 29, 1922

## at junctions

1	1/0 B.&S.G.s-r.alum.	10 B.&S.G. c-c. steel	1/4" galv. steel	C.P. 136 C.P. 133 C.P. 136	Jan. 17, 1914	Sept. 28, 1914
1	1/0 B.&S.G.s-r.alum.	10 B.&S.G. c-c. steel	1/4" galv. steel	C.P. 133	Jan. 17, 1914	Sept. 28, 1914
1	1/4" galv. steel	10 B.&S.G. c-c. steel	1/4" galv. steel	C.P. 136	Feb. 18, 1914	Sept. 28, 1914
2	1/0 B.&S.G. alum.	10 B.&S.G. c-c. steel	1/4" galv. steel	C.P. 136	Jan. 17, 1914	Sept. 28, 1914
	1/0 B.&S.G.s-r.alum.			C.P. 133		
1	1/0 B.&S.G.s-r.alum.	10 B.&S.G. c-c. steel	1/4" galv. steel	C.P. 133	Jan. 17, 1914	Sept. 28, 1914
1	1/0 B.&S.G.s-r.alum.	10 B.&S.G. c-c. steel	1/4" galv. steel	C.P. 133	Jan. 17, 1914	Sept. 28, 1914
1	2 B.&S.G.s-r. alum.	10 B.&S.G. c-c. steel	1/4" galv. steel	C.P. 136	Feb. 18, 1914	Sept. 28, 1914
1	2/0 B.&S.G.s-r.alum.	None	1/4" galv. steel	C.P. 505	June 21, 1922	Sept. 29, 1922

## at customers

1	1/0 B.&S.G. alum.	None	None	P. 2822	May 2, 1914	Oct. 6, 1914
1	1/0 B.&S.G. alum.	None	None	P. 2822	July 25, 1914	Oct. 6, 1914
1	1/0 B.&S.G. alum.	None	1/4" galv. steel	P. 2822	May 19, 1914	Oct. 19, 1914
1	1/0 B.&S.G. alum.	None	1/4" galv. steel	P. 2822	June 1, 1914	Oct. 19, 1914
1	2 B.&S.G.s-r. alum.	None	None	C.P. 505	April 19, 1920	June 18, 1920
1	2 B.&S.G.s-r. alum.	None	1/4" galv. steel	C.P. 105	June 21, 1922	Sept. 29, 1922
1	2 B.&S.G.s-r. alum.	None	1/4" galv. steel	C.P. 105	June 21, 1922	Sept. 29, 1922

= 0.83 miles.

## SYMBOL "M"

No. of circuits	Size and material of power cable	Size and material of telephone wire	Size and material of ground cable	Make and style of power insulators	Date work began	Date placed in operation
at stations						
1	2 B.&S.G.s-r. alum.	9 B.W.G. galv. iron	1/4" galv. steel	O.B. 12547	Aug. 6, 1915	Aug. 15, 1916

## DESCRIPTION

## ST. LAWRENCE SYSTEM—

New section number	Old section number	From	To	Avg. height of poles in feet	Avg. span in feet	Miles	No. of poles	Volt-age
Lines terminating								
L.	St. L.							
1462 x 2	.....	Jct. L1462.....	Avonmore.....					
1463 x 3	.....	Jct. L1463.....	Maxville.....	45	325	5.17	94	4,000
6 x 601	.....	Toronto Paper Co. dist. sta.	Howard Smith Paper Mills.....					550
10 x 701	6	Morrisburg met. sta....	Williamsburg.....			6.57		4,000
13 x 1302	.....	Martintown dist. sta....	Lancaster.....	30	160	11.59	399	4,000

Lines terminating								
72 x 22	.....	Pole No. 564, L72.....	Eugene Phillips Co....	40	175	2.60	67	44,000
11 x 1	.....	Mille Roche.....	Cornwall trans. sta....					
53 x 2	.....	Morrisburg jct. No. 1....	Prescott dist. sta....	40	120	22.96	1084	44,000
7 x 4	2	Williamsburg dist. sta....	Winchester dist. sta....	40	120	9.78	449	26,400
4 x 5	3	Winchester dist. sta....	Chesterville dist. sta....	40	120	6.71	303	26,400
68 x 6	12	Pole No. 85, L68.....	Toronto Paper Co. dist. sta.....	40	176	0.11	5	46,000
54 x 7	2	Pole No. 94, L54.....	Williamsburg dist. sta....	40	120	4.61	204	26,400
66 x 13	.....	Pole No. 143, L66.....	Martintown dist. sta....	45	325	5.55	88	44,000
13 x 14	.....	Martintown dist. sta....	Apple Hill dist. sta....	45	325	5.36	91	44,000
67 x 15	.....	Pole No. 349, L67.....	Alexandria dist. sta....	45	325	8.91	161	44,000
68 x 18	.....	Pole No. 85, L68.....	Cornwall P. & P. Co....	50	132	1.66	73	44,000
72 x 3	.....	Pole No. 564, L72.....	Brockville dist. sta....	40	120	1.58	75	44,000
54 x 21	.....	Winchester jct. No. 94....	Morrisburg dist. sta....	40	120	1.19	54	26,400

Lines terminating								
1 x 51	8	Cornwall trans. sta....	Pole No. 440, L51....	40	176	12.63	391	46,000
51 x 54	8	Pole No. 391, L51.....	Pole No. 94, L54.....	40	176	12.76	340	46,000
14 x 1462	.....	Apple Hill dist. sta....	Pole No. 18, L1462....	30	.....	1.04	18	4,000
1462 x 63	.....	Pole No. 18, L1462....	Pole No. 26, L1463....	30	.....	0.58	8	4,000
1 x 66	.....	Cornwall trans. sta....	Pole No. 143, L66....	45	325	8.12	143	44,000
14 x 67	.....	Apple Hill dist. sta....	Pole No. 349, L67....	45	325	1.62	27	44,000
1 x 68	12	Cornwall trans. sta....	Pole No. 85, L68.....	40	176	2.46	85	46,000
21 x 53	.....	Morrisburg dist. sta....	Pole No. 1, L53.....	40	120	0.77	40	26,400
2 x 72	.....	Prescott dist. sta....	Pole No. 564, L72....	40	120	12.50	555	44,000

NOTE.—L11 x 1, telephone line only.

L14 x 1462, carried on L14 x 67 poles.

L1462 x 63, carried on L14 x 67 poles.

Power supplied from Cedar Rapid Power Co. lines at 110,000 volts.



## OF LINES

## SYMBOL "L"

No. of circuits	Size and material of power cable	Size and material of telephone wire	Size and material of ground cable	Make and style of power insulators	Date work began	Date placed in operation
at customers						
1	2 B.&S.G.s-r. alum.	None	5/16" galv. steel	C.P. 1725	Oct. 8, 1920	Feb. 22, 1921
1	6 B.&S.G. m. h-d. cop	None	None	C.P. 105	Feb. 22, 1915	Mar. 20, 1915
1	2 B.&S.G.s-r. alum.	None	1/4" galv. steel	C.P. 105	Nov. 4, 1920	May 25, 1921

## at stations

1	4/0 B.&S.G.s-r.alum.	3 x 12 galv. steel	None	{C.P. 1159 C.P. 1725	April 21, 1922	Sept. 30, 1922
1	3/0 B.&S.G. alum.	10 B.&S.G.c-c. steel	1/4" galv. steel	Thom 2111	Oct. 29, 1912	Oct. 23, 1913
1	5/16" galv. steel	10 B.&S.G.c-c. steel	1/4" galv. steel	Thom 2111	June 4, 1912	Dec. 18, 1913
1	3/0 B.&S.G. alum.	10 B.&S.G.c-c. steel	1/4" galv. steel	Thom 2111	Sept. 6, 1913	Feb. 7, 1914
1	336,000 c.m.s-r.alum	9 B.W.G.galv.iron	9/32" galv. steel	{C.P. 1159 J.D. 2 units J.D. 3 units	Sept. 24, 1918	June 19, 1919
1	5/16" galv. steel	10 B.&S.G.c-c. steel	1/4" galv. steel	Thom 2111	June 4, 1912	Dec. 18, 1913
1	2 B.&S.G.s-r. alum.	3 x 12 galv. steel	9/32" galv. steel	{J.D. 2 units J.D. 3 units	June 4, 1920	Jan. 18, 1921
1	2 B.&S.G.s-r. alum.	3 x 12 galv. steel	9/32" galv. steel	{J.D. 2 units J.D. 3 units	July 15, 1920	Jan. 18, 1921
1	2 B.&S.G.s-r. alum.	3 x 12 galv. steel	9/32" galv. steel	{J.D. 2 units J.D. 3 units C.P. 1159	Aug. 12, 1920	Jan. 18, 1921
1	6/0 B.&S.G.s-r.alum.	6 B.&S.G.s-r. al'm.	9/32" galv. steel	{J.D. 2 units J.D. 3 units C.P. 133	Jan. 13, 1921	May 26, 1921
1	3/0 B.&S.G. alum.	10 B.&S.G.c-c. steel	1/4" galv. steel	Thom 2111	Oct. 16, 1914	April 4, 1915
2	{5/16" galv. steel 1-c. 3/0 B.&S.G.alum.1-c	10 B.&S.G.c-c. steel	1/4" galv. steel	Thom 2111	June 4, 1912	Dec. 18, 1913

## at junctions

1	3/0 B.&S.G. alum.	9 B.W.G. galv. iron	9/32" galv. steel	{C.P. 1159 J.D. 2 units J.D. 3 units C.P. 1159	May 7, 1918	April 30, 1919
1	3/0 B.&S.G. alum.	9 B.W.G.galv.iron	9/32" galv. steel	{J.D. 2 units J.D. 3 units C.P. 1159	May 7, 1918	April 30, 1919
1	2 B.&S.G.s-r. alum.	None	None	C.P. 105	Jan. 15, 1921	Feb. 22, 1921
1	2 B.&S.G.s-r. alum.	None	None	C.P. 105	Jan. 30, 1921	Feb. 22, 1921
1	2 B.&S.G.s-r. alum.	3 x 12 galv. steel	9/32" galv. steel	{J.D. 2 units J.D. 3 units	June 2, 1920	Jan. 18, 1921
1	2 B.&S.G.s-r. alum.	3 x 12 galv. steel	9/32" galv. steel	{J.D. 2 units J.D. 3 units C.P. 1159	Aug. 11, 1920	Jan. 18, 1921
1	336,000 c.m.s-r.alum	9 B.W.G.galv.iron	9/32" galv. steel	{J.D. 2 units J.D. 3 units C.P. 133	Sept. 24, 1918	June 19, 1919
1	5/16" galv. steel	10 B.&S.G.c-c. steel	1/4" galv. steel	C.P. 133	Aug. 21, 1922	Aug. 21, 1922
1	3/0 B.&S.G. alum.	10 B.&S.G.c-c. steel	1/4" galv. steel	C.P. 133	Oct. 16, 1914	April 4, 1915

DESCRIPTION  
RIDEAU SYSTEM—

New section number	Old section number	From	To	Avg. height of poles in feet	Avg. span in feet	Miles	No. of poles	Volt-age
H.	R.L.							
8 x 2	1	Balderson dist. sta....	Perth dist. sta.....	35	132	4.95	201	26,400
55 x 3	2	Pole No. 1328, H55....	Smith's Falls dist. sta.	35	132	5.64	233	26,400
55 x 5	4	Pole No. 1328, H55....	Carleton Place dist. sta.	30	150	14.24	523	26,400
3 x 7	3	Smith's Falls dist. sta..	Merrickville gen. sta..	35	132	12.30	517	26,400
1 x 8	1	High Falls gen. sta....	Balderson dist. sta....	35	132	16.08	666	26,400
2 x 55	2	Perth dist. sta.....	Pole No. 1328, H55....	35	132	11.31	459	26,400
8 x 801		Balderson dist. sta....	Lanark.....	30	160	4.97	171	2,300
7 x 10		Merrickville gen. sta...	Grenville Crushed Rock Co.....	35	250	5.94	127	26,400
10 x 9		Grenville Crushed Rock Co.....	Kemptville dist. sta...	35	250	6.19	130	26,400

THUNDER BAY SYSTEM—

New section number	Old section number	From	To	Avg. height of poles in feet	Avg. span in feet	Miles	No. of poles	Volt-age
P.								
2(T)x231		Port Arthur (temp.)..	Port Arthur sub.....	45	125	5.04	.....	22,000
1 x 50		Nipigon gen. sta.....	Sprucewood.....	45	330	17.24	284	110,000
50 x 51		Sprucewood jct. ....	Everard switch.....	.....	.....	1.90	30	110,000
51 x 55		Everard.....	Hurkett switch.....	45	330	7.06	113	110,000
55 x 52		Hurkett.....	Pearl switch.....	.....	.....	15.05	243	110,000
52 x 53		Pearl.....	Sibley switch.....	45	330	12.95	209	110,000
53 x 54		Sibley.....	Bear Point jct.....	45	330	13.88	227	110,000
54x2(T)		Bear Point jct.....	Pt. Arthur (temp.) trans. sta.	45	330	0.35	6	110,000
1 x 56		Nipigon gen. sta.....	Nipigon jct.....	Right-of-way	cleared	and tel	ephone	
56 x 50		Nipigon jct.....	Sprucewood jct.....	45	330	6.43	106	110,000
56 x 6		Nipigon jct.....	Nipigon Fibre & P. Co.	45	330	0.25	5	110,000
261 x 231		Lyon ave. jct.....	Port Arthur dist. sta..	45	125	2.18	.....	22,000
261x2(P)		Lyon Ave. jct.....	Port Arthur trans. sta.	45	125	1.64	.....	22,000
2(P)x301		Port Arthur trans. sta.	Kaministiquia Power Co. jct.....	45	125	0.70	.....	22,000

NOTE.—For operating purposes, sections P50 x P6 have been grouped and are known as P50 x 6. For operating purposes, sections P50 x P2 (temporary station) have been grouped and Circuits in the section 2(T) x 231 are owned by the municipality of Port Arthur.

## OF LINES

## SYMBOL "H"

No. of circuits	Size and material of power cable	Size and material of telephone wire	Size and material of ground cable	Make and style of power insulators	Date work began	Date placed in operation
1	125,000 c.m.s-r.alum	9 B.W.G.galv.iron	9/32" galv.steel	C.P. 889	Aug. 22, 1918	June 23, 1919
1	125,000 c.m.s-r.alum	9 B.W.G.galv.iron	9/32" galv. steel	C.P. 889	April 12, 1918	Feb. 18, 1919
1	125,000 c.m.s-r.alum	9 B.W.G.galv.iron	9/32" galv.steel	{C.P. 889 O.B. 11622	May 7, 1919	May 31, 1920
1	5/16" galv. steel	9 B.W.G.galv.iron	1/4" galv. steel	C.P. 889	Nov. 27, 1917	Sept. 5, 1918
1	125,000 c.m.s-r.alum	9 B.W.G.galv.iron	9/32" galv.steel	C.P. 889	Aug. 22, 1918	June 23, 1919
1	125,000 c.m.s-r.alum	9 B.W.G.galv.iron	9/32" galv.steel	C.P. 889	April 12, 1918	Feb. 18, 1919
1	2 B.&S.G.s-r.alum.	None	None	C.P. 105	July 26, 1921	Sept. 29, 1921
1	3 x 12 galv. steel	3 x 12 galv. steel	None	O.B. 9410	July 26, 1921	Nov. 28, 1921
1	3 x 12 galv. steel	3 x 12 galv. steel	None	O.B. 9410	July 26, 1921	Nov. 28, 1921

## SYMBOL "P"

No. of circuits	Size and material of power cable	Size and material of telephone wire	Size and material of ground cable	Make and style of power insulators	Date work began	Date placed in operation
2	4/0 B.&S.G.s-r.alum.	No. 10 copper	1/4" galv. steel	C.P. 889	Prop. of Port	Arthur 1920
1	4/0 B.&S.G.s-r.alum.	3 x 13 galv. steel	9/32" galv. steel	C.P. 2133	Dec. 17, 1919	Dec. 20, 1920
1	4/0 B.&S.G.s-r.alum.	3 x 13 galv. steel	9/32" galv. steel	C.P. 2133	Dec. 17, 1919	Dec. 20, 1920
1	4/0 B.&S.G.s-r.alum.	3 x 13 galv. steel	9/32" galv. steel	O.B. 12464	Mar. 1, 1919	Dec. 20, 1920
1	4/0 B.&S.G.s-r.alum.	3 x 13 galv. steel	9/32" galv. steel	O.B. 12464	Mar. 1, 1919	Dec. 20, 1920
1	4/0 B.&S.G.s-r.alum.	3 x 13 galv. steel	9/32" galv. steel	C.P. 2133	Oct. 27, 1919	Dec. 20, 1920
1	4/0 B.&S.G.s-r.alum.	3 x 13 galv. steel	9/32" galv. steel	C.P. 2133	May 3, 1919	Dec. 20, 1920
1	4/0 B.&S.G.s-r.alum.	3 x 13 galv. steel	9/32" galv. steel	C.P. 2133	Nov. 4, 1920	Dec. 20, 1920
line in stalled only						
1	4/0 B.&S.G.s-r.alum.	3 x 12 galv. steel	9/32" galv. steel	C.P. 2133	Nov. 20, 1920	April 29, 1921
1	4/0 B.&S.G.s-r.alum.	3 x 12 galv. steel	9/32" galv. steel	C.P. 2133	Mar. 9, 1921	April 29, 1921
Ind. poles						
2	205,500 c m. alum.					
2	{3/0 B.&S.G. alum...	10 B.&S.G. copper	1/4" galv. steel	O.B. 9410	.....	1910
2	{205,500 c.m. alum...	10 B.&S.G. copper	1/4" galv. steel	O.B. 9410	.....	1910 restrung
2	{3/0 B.&S.G. alum.					1914
2	{205,500 c.m. alum.	10 B.&S.G. copper	1/4" galv. steel	O.B. 9410	.....	1910 restrung
2	{3/0 B.&S.G. alum.					1917

are known as P50 x 2(T)



## DESCRIPTION

## CENTRAL ONTARIO AND TRENT SYSTEM—

New section number	Old section number	From	To	Avg. height of poles in feet	Avg. span in feet	Miles	No. of poles	Volt-age
Lines terminating								
2 x 3*	.....	Sydney gen. sta.....	Sydney terminal sta.....	.....	.....	.....	None	6,600
5 x 3	62 & 63	Frankford gen. sta.....	Sydney terminal sta.....	35	100	4.70	240	6,600
53 x 3	R	Wooler pole, C53.....	Sydney terminal.....	40	176	6.43	207	44,000
96 x 6	H	Picton jct., C96.....	Brighton trans. sta.....	35	132	7.30	307	44,000
6 x 7	H	Brighton trans. sta.....	Colborne trans. sta.....	35	132	10.10	366	44,000
12 x 11	12	Campbellford mun. sta.....	Seymour gen. sta.....	30	132	1.20	50	2,400
7 x 13	Tie line	.....	.....	.....	.....	.....	.....	.....
13 x 16	H	Colborne trans. sta.....	Cobourg trans. sta.....	35	132	13.80	644	44,000
17 x 18*	H	Cobourg trans. sta.....	Port Hope trans. sta.....	35	132	6.70	256	44,000
	20	Peterboro hydraulic ..	Auburn gen. sta.....	.....	.....	1.00	.....	2,400
18 x 19	80 & 81	Auburn gen. sta.....	Auburn trans. sta.....	Under ground	Cables	200 ft.	6,600	
18 x 20	83, 84 & 85	Auburn gen. sta.....	Peterboro trans. sta.....	30-50	100	2.00	105	6,600
66 x 22	C	Port Hope sw. sta.....	Newcastle trans. sta. .	35	132	15.60	717	44,000
22 x 23	C	Newcastle trans. sta.....	Bowmanville trans. sta.	35	132	4.50	206	44,000
				40	150	1.20	40	44,000
23 x 24	C	Bowmanville trans. sta.	Oshawa trans. sta.....	35	132	9.70	437	44,000
75 x 25	Millb'k	Millbrook jct., C75....	Millbrook trans. sta.....	35	132	1.70	71	44,000
76 x 29	Tap	.....	.....	.....	.....	.....	.....	.....
30 x 29	L	Omemee sw. tower.....	Lindsay trans. sta.....	35	132	13.20	559	44,000
	100 & 101	Fenelon Falls gen. sta.	Lindsay trans. sta.....	30	100	13.00	725	11,000
14 x 31	Y	Heely Falls gen. sta....	Norwood trans. sta....	40	300	10.44	174	44,000
47 x 32	.....	Marmora trans. sta....	Deloro trans. sta.....	35	132	4.10	182	44,000
83 x 33	Madoc	Madoc jct., C83.....	Madoc trans. sta.....	35	132	9.60	437	44,000
83 x 34	Tap	.....	.....	.....	.....	.....	.....	.....
85 x 35	A	Madoc jct., C83.....	Sulphide trans. sta....	35	132	20.30	862	44,000
	Stirling	Stirling jct., C85.....	Stirling trans. sta.....	35	132	0.20	8	44,000
86 x 36	Tap	.....	.....	.....	.....	.....	.....	.....
	Pulp M.	Pulp Mill jct., C86....	Campbellford Pulp Mill trans. sta.....	35	132	1.40	55	44,000
87 x 37	Tap	.....	.....	.....	.....	.....	.....	.....
	64 & 65	Brit. Chem. Co. jct. C87	Trenton trans. sta. ...	30	132	0.50	20	6,600
88 x 38	B'ville	Belleville sw. sta.....	Belleville trans. sta. .	35	132	1.30	41	44,000
90 x 39	Tap	.....	.....	.....	.....	.....	.....	.....
	B.C.Co.	Belleville Chem. Co. jct., C90.	Belleville Cement Co. sta.	35	132	1.00	55	44,000
90 x 40	Tap	.....	.....	.....	.....	.....	.....	.....
	Quarry	Belleville Cement Co. jct., C90	Pt. Anne Quarries sta.	35	132	0.90	49	44,000
91 x 41	Tap	.....	.....	.....	.....	.....	.....	.....
	E & F	Lehigh jct., C91.....	Lehigh Cem. Co. trans. sta.....	35	132	0.60	33	44,000
92 x 42	J	Deseronto jct., C92....	Deseronto trans. sta. .	35	132	2.80	115	44,000
92 x 43	J	Deseronto jct., C92....	Napanee trans. sta....	35	132	6.00	246	44,000
43 x 44	J	Napanee trans. sta.....	Kingston trans. sta. .	40	175	26.50	863	44,000
96 x 45	Tap	.....	.....	.....	.....	.....	.....	.....
	Picton	Picton jct., C96.....	Wellington trans. sta..	40	176	17.45	511	44,000
45 x 46	Tap	.....	.....	.....	.....	.....	.....	.....
	Picton	Wellington trans. sta...	Picton trans. sta.....	40	176	10.80	331	44,000
82 x 47	Tap	.....	.....	.....	.....	.....	.....	.....
	Deloro	Deloro jct., C82.....	Marmora trans. sta....	35	132	10.40	464	44,000

NOTE.—\*C2 x 3, underground cables only.

\*C17 x 18, carried on C18 x 20 poles.

## OF LINES

## SYMBOL "C"

No. of circuits	Size and material of power cable	Size and material of telephone wire	Size and material of ground cable	Make and style of power insulators	Date work began	Date placed in operation
at transformers or generating stations						
2	.....	Style "B" .....	.....	.....	.....	1911
3	300,000 c.m. alum.	9 B.W.G. galv. iron	5/16" galv. steel	Locke 298	.....	1912
1	2/0 B.&S.G. copper	10 B.&S.G. c-c. steel	1/4" galv. steel	O.B. 11623	.....	1918
1	4/0 B.&S.G. alum.	9 B.W.G. galv. iron	5/16" galv. steel	{C.P. 1159	.....	1911
				{O.B. 11623	.....	
1	4/0 B.&S.G. alum.	9 B.W.G. galv. iron	5/16" galv. steel	C.P. 1159	.....	1911
3	4/0 B.&S.G. alum.	9 B.W.G. galv. iron	.....	.....	.....	1910
1	4/0 B.&S.G. alum.	9 B.W.G. galv. iron	5/16" galv. steel	C.P. 1159	.....	1911
1	4/0 B.&S.G. alum.	9 B.W.G. galv. iron	5/16" galv. steel	C.P. 1159	.....	1911
1	1 B.&S.G. copper	.....	.....	.....	.....	1902
						Rebuilt 1918
2	.....	.....	.....	.....	.....	.....
3	{ 2/0 B.&S.G. cop. 1-cir.	.....	.....	.....	.....	1902
	{ 1 B.&S.G. cop. 2-cir.	.....	.....	.....	.....	Rebuilt 1918
1	4/0 B.&S.G. alum.	9 B.W.G. galv. iron	5/16" galv. steel	C.P. 1159	.....	1911
1	4/0 B.&S.G.s-r.alum.	9 B.W.G. galv. iron	5/16" galv. steel	C.P. 1159	.....	1911
2	4/0 B.&S.G.s-r.alum.	9 B.W.G. galv. iron	5/16" galv. steel	C.P. 1159	.....	1911
1	4/0 B.&S.G. alum.	9 B.W.G. galv. iron	5/16" galv. steel	C.P. 1159	.....	1911
1	6 B.W.G. galv. iron	9 B.W.G. galv. iron	5/16" galv. steel	O.B. 10638	.....	1912
1	2/0 B.&S.G. alum.	9 B.W.G. galv. iron	5/16" galv. steel	C.P. 1159	.....	1912
2	4 B.&S.G. copper	9 B.W.G. galv. iron	barbed wire	.....	.....	1899
1	4/0 B.&S.G.s-r.alum.	3 x 13 galv. steel	9/32" galv. steel	C.P. 1725	{2-susp. 3-strain.	1920
1	2 B.&S.G. alum.	9 B.W.G. galv. iron	5/16" galv. steel	C.P. 1159	.....	1909
1	2 B.&S.G. alum.	9 B.W.G. galv. iron	5/16" galv. steel	C.P. 1159	.....	1910
1	2 B.&S.G. alum.	9 B.W.G. galv. iron	5/16" galv. steel	O.B. 25529	.....	1910
1	2 B.&S.G. alum.	9 B.W.G. galv. iron	5/16" galv. steel	{362 Locke	.....	1910
				{Retested	.....	
				{362 Locke	.....	
				{Retested	.....	
1	2 B.&S.G. alum.	9 B.W.G. galv. iron	5/16" galv. steel	.....	.....	1911
2	4/0 B.&S.G. alum.	9 B.W.G. galv. iron	.....	.....	.....	1911
						Rebuilt 1917
1	{ 4/0 B.&S.G. alum.	9 B.W.G. galv. iron	5/16" galv. steel	C.P. 1159	.....	1910
	{ 2 B.&S.G. alum.	.....	.....	.....	.....	
1	2 B.&S.G. alum.	9 B.W.G. galv. iron	5/16" galv. steel	C.P. 1159	.....	1911
1	2 B.&S.G. alum.	9 B.W.G. galv. iron	5/16" galv. steel	C.P. 1159	.....	1911
2	2 B.&S.G.s-r. alum.	9 B.W.G. galv. iron	5/16" galv. steel	C.P. 1159	.....	.....
1	1/4" x 5/16" galv. steel	9 B.W.G. galv. iron	5/16" galv. steel	C.P. 1159	.....	1912
1	4/0 B.&S.G. alum.	9 B.W.G. galv. iron	5/16" galv. steel	C.P. 1159	.....	1912
1	1/0 B.&S.G. copper	9 B.W.G. galv. iron	1/4" galv. steel	C.P. 1725	.....	1917
1	9/32" galv. steel	9 B.W.G. galv. iron	9/32" galv. steel	C.P. 1159	.....	1919
1	9/32" galv. steel	9 B.W.G. galv. iron	9/32" galv. steel	C.P. 1159	.....	1919
1	2 B.&S.G. alum.	9 B.W.G. galv. iron	5/16" galv. steel	C.P. 1159	.....	1909

## DESCRIPTION

## CENTRAL ONTARIO AND TRENT SYSTEM—

New section number	Old section number	From	To	Avg. height of poles in feet	Avg. span in feet	Miles	No. of poles	Volt- age
Lines terminating								
C. 86 x 52	G	Pulp Mill jct. C86.....	G.B. jct., C52.....	35	132	14.20	641	44,000
14 x 61	O	Heely Falls.....	Campbellford jct., C61.	35	132	3.60	169	44,000
16 x 66	H	Port Hope.....	Port Hope sw. sta.....	35	132	0.20	7	44,000
66 x 75	K	Port Hope sw. sta.....	Millbrook jct., C75....	35	132	15.50	663	44,000
79 x 76	L	Lindsay jct., C79.....	Omemeesw. tower C76	35	132	6.00	253	44,000
75 x 79	K	Millbrook jct., C75....	Lindsay jct., C79.....	35	132	10.70	447	44,000
11 x 82	A	Seymour gen. sta.....	Deloro sw. sta., C82..	35	132	5.50	244	44,000
84 x 83	A	Harold jct., C84.....	Madoc jct., C83.....	35	132	5.10	212	44,000
82 x 84	A	Deloro jct., C82.....	Harold jct., C84.....	35	132	4.50	182	44,000
85 x 84	Q	Stirling jct., C85.....	Harold jct., C84.....	35	132	8.30	308	44,000
52 x 85	Q	G. B. jct., C52.....	Stirling jct., C85.....	35	132	1.10	46	44,000
11 x 86	G	Seymour gen. sta.....	Pulp Mill jct., C86...	35	132	1.20	57	44,000
3 x 87	64 & 65	Sidney terminal sta....	Br. Chem. Co., jct. C87	30	132	0.70	28	6,600
3 x 88	M	Sidney terminal sta....	Belleville sw. sta.....	35	132	12.70	516	44,000
52 x 88	B	G.B. jct., C52.....	Belleville sw. stn.....	35	132	13.00	568	44,000
88 x 90	E & F	Belleville sw. sta.....	Belleville Cem. Co., jct., C90.....	35	132	4.80	246	44,000
90 x 91	E & F	Belleville Cem. Co. jct. C90	Lehigh jct., C91.....	35	132	1.00	51	44,000
91 x 92	J	Lehigh jct., C91.....	Deseronto jct., C92...	35	132	11.20	552	44,000
3 x 96	H	Sidney terminal sta....	Picton jct., C96.....	35	132	4.70	203	44,000
10 x 60	.....	Ranney Falls gen. sta..	Pole No. 249, C60....	40	125	0.38	15	44,000
64 x 49	.....	Jct. pole No. 358, C64	Warksworth sta., C49.	40	176	2.56	79	44,000
49 x 53	.....	Warksworth sta. C49...	Wooler pole No. 768 C53	40	176	10.38	330	44,000
14 x 60	.....	Heely Falls gen. sta....	Pole No. 249, C60....	40	176	17.48	249	44,000
8 x 64	.....	Dam No. 8, gen. sta. C8..	Pole No. 358, C64....	40	125	0.60	24	44,000
31 x 69	.....	Norwood trans. sta....	Auburn switch sta....	40	300	17.89	301	44,000
79 x 69	.....	Lindsay jct., C79.....	Auburn switch sta....	35	132	8.70	384	44,000
9 x 59	.....	Dam No. 9.....	Pole No. 289, C59....	40	125	0.73	11	44,000
60 x 59	.....	Pole No. 249, C60.....	Pole No. 289, C59....	40	176	1.26	40	44,000
59 x 64	.....	Pole No. 289, C59.....	Pole No. 358, C64....	40	176	2.14	70	44,000



## OF LINES

## SYMBOL "C"—Continued

No. of circuits	Size and material of power cable	Size and material of telephone wire	Size and material of ground cable	Make and style of power insulators	Date work began	Date placed in operation
at switching stations or junctions						
1	4/0 B.&S.G. alum.	9 B.W.G. galv. iron	5/16" galv. steel	{362 Locke Retested	.....	1911
1	4/0 B.&S.G. alum.	9 B.W.G. galv. iron	5/16" galv. steel	{362 Locke Retested	.....	1912
1	4/0 B.&S.G. alum.	9 B.W.G. galv. iron	5/16" galv. steel	C.P. 1159	.....	1911
1	4/0 B.&S.G. alum.	9 B.W.G. galv. iron	5/16" galv. steel	{Pole 1-600 362 Locke C.P. 1159	.....	1912
1	2/0 B.&S.G. alum.	9 B.W.G. galv. iron	5/16" galv. steel	{P.600-630 362 Locke C.P. 1159	.....	1912
1	4/0 B.&S.G. alum.	9 B.W.G. galv. iron	5/16" galv. steel	{362 Locke Retested	.....	1909
1	2 B.&S.G. alum.	9 B.W.G. galv. iron	5/16" galv. steel	{362 Locke Retested	.....	1910
1	2 B.&S.G. alum.	9 B.W.G. galv. iron	5/16" galv. steel	{O.B. 25529 C.P. 1159	.....	1909
1	2 B.&S.G. alum.	9 B.W.G. galv. iron	5/16" galv. steel	{362 Locke Retested	.....	1910
1	2 B.&S.G. alum.	9 B.W.G. galv. iron	5/16" galv. steel	{362 Locke Retested	.....	1910
1	4/0 B.&S.G. alum.	9 B.W.G. galv. iron	5/16" galv. steel	{362 Locke Retested	.....	1911
2	4/0 B.&S.G. alum.	9 B.W.G. galv. iron	.....	.....	.....	1911
1	4/0 B.&S.G. alum.	9 B.W.G. galv. iron	5/16" galv. steel	C.P. 1159	.....	Rebuilt 1917
1	4/0 B.&S.G. alum.	9 B.W.G. galv. iron	5/16" galv. steel	{C.P. 1159 O.B. 11623	.....	1911
2	4/0 B.&S.G. alum.	9 B.W.G. galv. iron	5/16" galv. steel	{C.P. 1159 O.B. 12855	.....	1910
2	4/0 B.&S.G. alum.	9 B.W.G. galv. iron	5/16" galv. steel	C.P. 1159	.....	1911
1	4/0 B.&S.G. alum.	9 B.W.G. galv. iron	5/16" galv. steel	C.P. 1159	.....	1912
1	4/0 B.&S.G. alum.	9 B.W.G. galv. iron	5/16" galv. steel	O.B. 11623	.....	1911
2	4/0 B.&S.G.s-r.alum.	10 B.&S.G.c-c.steel	None	{C.P. 1159 C.P. 1725	.....	Aug. 12, 1922
1	2/0 B.&S.G. copper	10 B.&S.G.c-c.steel	1/4" galv. steel	O.B. 11623	.....	1923
1	2/0 B.&S.G. copper	10 B.&S.G.c-c.steel	1/4" galv. steel	O.B. 11623	.....	1918
1	2/0 B.&S.G. copper	10 B.&S.G.c-c.steel	1/4" galv. steel	O.B. 11623	.....	1918
1	4/0 B.&S.G.s-r.alum.	10 B.&S.G.c-c.steel	None	C.P. 1159	.....	1923
1	4/0 B.&S.G.s-r.alum.	3 x 13 galv. steel	9/32" galv. steel	C.P. 1925	{2-susp. 3-strain.	1920
1	4/0 B.&S.G. alum.	9 B.W.G. galv. iron	5/16" galv. steel	C.P. 1159	.....	1912
1	3/0 B.&S.G.s-r.alum.	1/4" galv. steel	None	O.B. 12464	.....	1923
1	2/0 B.&S.G. copper	10 B.&S.G.c-c.steel	1/4" galv. steel	O.B. 11623	.....	1918
1	2/0 B.&S.G. copper	10 B.&S.G.c-c.steel	1/4" galv. steel	O.B. 11623	.....	1918

## DESCRIPTION

## CENTRAL ONTARIO AND TRENT SYSTEM—

New section number	Old section number	From	To	Avg. height of poles in feet	Avg. span in feet	Miles	No. of poles	Voltage
Lines terminating								
87 x 301	70	Br. Chem. Co. jct., C87	Br. Chem. Co. Trenton	30	132	0.10	6	6,600
5 x 501		Frankford gen. sta.....	Companies at Frankf'd	30	132	2.00	85	6,600
11 x 1101	72	Seymour gen. sta.....	Co.s at Campbellford.	30	132	1.25	50	2,400
11 x 1106		Seymour gen. sta.....	Hoard's.....	30	150	12.00	.....	6,600
† 18x1801	82	Auburn gen. sta.....	Auburn Woollen Mills	30	132	0.10	5	6,600
22 x 2201	Orono	Newcastle trans. sta....	Newcastle.....	35	132	1.00	40	2,400
2201 x 2		Newcastle.....	Orono.....	30	132	5.00	210	2,400
24 x 2402		Oshawa trans. sta. ....	Whitby.....	30	132	4.00	175	4,160
† 30x3001		Fenelon Falls gen. sta..	Fenelon Falls.....	.....	550	.....	.....	.....
† 33x3302	.....	Madoc trans. sta. ....	Can. Sulphur Ore.....	.....	.....	.....	.....	.....
3363 x 3		Cross & Wellington jct., C3363	Cross & Wellington...	30	132	1.50	60	4,160
3365 x 5	.....	Gillespie Talc Mine jct., C3365	Gillespie Talc Mines..	30	132	0.10	3	4,160
3365 x 6	.....	Gillespie Talc Mine jct., C3365	Anglo-American Talc	30	132	0.20	8	4,160
33 x 3307	.....	Madoc trans. sta. ....	Gillespie Talc Mill....	30	132	1.00	40	4,160
33 x 3363		Madoc trans. sta. ....	Cross & Wellington jct. C3363	30	132	0.80	32	4,160
3363 x 65	.....	Cross & Wellington jct., C3363	Gillespie Talc Mine jct. C3365	30	132	1.25	50	4,160
34 x 3402	New-	Sulphide trans. sta. ....	Tweed.....	30	132	6.00	240	4,160
43 x 4302		Napanee trans. sta. ....	Newburgh.....	30	132	7.92	328	4,160
† 45x4502	B'field	Wellington trans. sta...	Bloomfield.....	.....	.....	6.53	.....	4,160
14 x 1401	73	Heely Falls power hse..	Ontario Rock Co.....	30	150	6.01	222	6,600
18 x 1832	82	Auburn gen. sta.....	Lakefield trans. sta. ..	30	150	7.92	290	6,600
26 x 2601	.....	Omeme trans. sta. ....	Omeme.....	30	132	1.00	40	4,160
31 x 3102	.....	Norwood trans. sta. ....	Havelock.....	30	150	6.62	259	4,000
49 x 1	.....	Warksworth sta.....	Warksworth.....	30	160	3.50	140	2,300

\* And 2 towers.

NOTE.—† C18 x 1801 carried on C18 x 1832 poles.

C45 x 4502 carried on C45 x 46 poles.

C30 x 3001—1 span only, crossing river.

C33 x 3302—This line has been dismantled.

## NIPISSING SYSTEM—

New section number	Old section number	From	To	Avg. height of poles in feet	Avg. span in feet	Miles	No. of poles	Voltage
Z.								
1 x 101	.....	Nipissing gen. sta.....	Nipissing village.....	28	126	2.50	128	2,200
1 x 52	.....	Nipissing gen. sta.....	Powassan tap, Z52....	34	126	3.00	137	22,000
52 x 3	.....	Powassan, Z52.....	Callendar dist. sta....	34	126	7.00	318	22,000
3 x 4	.....	Callendar dist. sta....	North Bay dist. sta. ..	35	126	8.20	401	22,000
6 x 52	.....	Bingham Chute gen. sta.	Bingham Chute jct. ....	35	132	0.55	.....	22,000
52 x 56	.....	Powassan tap.....	Bingham Chute jct. ....	32	126	3.38	.....	22,000
56 x 2	.....	Bingham Chute jct....	Powassan.....	32	126	0.62	.....	22,000

## OF LINES

## SYMBOL "C"—Continued

No. of circuits	Size and material of power cable	Size and material of telephone wire	Size and material of ground cable	Make and style of power insulators	Date work began	Date placed in operation
at customers and junctions						
1	4/0 B.&S.G. alum.	9 B.W.G. galv iron	.....	.....	.....	1917
1	6 B.&S.G. copper	.....	.....	.....	.....	1914
1	2 B.&S.G. alum.	.....	.....	.....	.....	.....
1	4/0 B.&S.G. alum.	9 B.W.G. galv. iron	9/32" galv. steel	.....	.....	1912
1	2 B.&S.G. alum.	.....	.....	Locke 298	.....	1912
1	9/32" galv. steel	.....	.....	.....	.....	Rebuilt 1918
1	4 B.&S.G.w.p. cop'r	.....	.....	.....	.....	1911
1	2 B.&S.G. alum.	.....	.....	.....	.....	1912
1	4/0 B.&S.G. alum.	.....	5/16" galv. steel	.....	.....	1912
1	4/0 B.&S.G. alum.	.....	.....	.....	.....	1914
1	1 B.&S.G. std. copper	.....	5/16" galv. steel	.....	.....	1917
1	2 B.&S.G. alum.	.....	5/16" galv. steel	.....	.....	1914
1	6 B.&S.G. copper	.....	5/16" galv. steel	.....	.....	1916
1	2 B.&S.G. alum.	.....	.....	.....	.....	1914
1	2/0 B.&S.G. copper	.....	5/16" galv. steel	.....	.....	1911
1	2 B.&S.G. alum.	.....	5/16" galv. steel	.....	.....	Rewired 1918
1	2/0 B.&S.G. alum.	9 B.W.G. galv. iron	9/32" galv. steel	.....	.....	1912
1	2 B.&S.G. solid copp'r	.....	6 B.W.G. galv iron	.....	.....	1917
1	2 B.&S.G.s-r. alum.	.....	.....	C.P. 105B	.....	1919
1	2 B.&S.G.s-r. alum.	.....	9/32" galv. steel	Thom. 2041	.....	1920
1	2 B.&S.G.s-r. alum.	.....	9/32" galv. steel	Thom. 2041	.....	1920
1	6 B.&S.G.w.p. cop'r	.....	9/32" galv. steel	.....	.....	1917
1	2 B.&S.G.s-r. alum.	.....	4x12 galv. steel	C.P. 505	.....	1921
1	6 B.&S.G.h-d. bare copper	None	6 B.&S.G. h-d. bare copper	C.P. 105	.....	Sept. 1923

## SYMBOL "Z"

No. of circuits	Size and material of power cable	Size and material of telephone wire	Size and material of ground cable	Make and style of power insulators	Date work began	Date placed in operation
1	6 B.&S.G.w.p. cop'r	None	None	Similar to O.B. 9410	1911	1911
1	2 B.&S.G. alum.	9 B.W.G. galv. iron	1/4" galv. steel	do.	Aug., 1909	Mar., 1910
1	2 B.&S.G. alum.	9 B.W.G. galv. iron	1/4" galv. steel	do.	Aug., 1909	Mar., 1910
1	2 B.&S.G. alum.	9 B.W.G. galv. iron	1/4" galv. steel	do.	Aug., 1909	Mar., 1910
1	1/0 B.&S.G.s-r. alum.	9 B.W.G. galv. iron	5/16" galv. steel	C.P. 899	May 1, 1923	Dec. 2, 1923
1	2 B.&S.G. alum.	9 B.W.G. galv. iron	5/16" galv. steel	O.B. 9410	Nov., 1911	1911
1	2 B.&S.G. alum.	9 B.W.G. galv. iron	5/16" galv. steel	O.B. 9410	Nov., 1911	1911



## DISTRIBUTION LINES AND SYSTEMS

Below is shown in tabular form the work carried on under the supervision of the Distribution section of the Electrical Engineering and Laboratory department during the year ended October 31, 1923.

This work includes the construction of rural distribution systems, the installation of a number of 4,000- and 2,300-volt feeders to supply urban municipalities and some special consumers, and the construction of metering equipments. Distribution systems were constructed by the Commission for certain municipalities, at the request and at the expense of the municipalities concerned.

### RURAL DISTRIBUTION SYSTEMS CONSTRUCTED

Rural power district	Property number	At October 31, 1922		At October 31, 1923	
		Miles of primary line constructed	Number of consumers receiving service	Miles of primary line constructed	Number of consumers receiving service

#### NIAGARA SYSTEM

Niagara.....	N1D1	3.50	13	3.50	13
Homer.....	N1D2	.....	.....	2.57	40
Jordan.....	N1D3	8.00	24	16.12	63
Beamsville.....	N1D4	16.00	.....	36.35	255
Welland.....	N1D5	0.65	38	0.65	49
Stamford.....	N1D6	6.50	114	6.88	159
Chippawa.....	N1D7	7.55	79	7.55	79
Dundas.....	N2D1	4.30	22	4.30	25
Lynden.....	N2D2	5.50	35	10.50	35
Waterdown.....	N2D3	1.89	29	1.89	33
Markham.....	N3D1	3.88	.....	7.75	114
Scarboro.....	N3D2	.....	.....	0.65	1
Dorchester.....	N4D1	30.00	206	32.76	226
London.....	N4D2	3.00	.....	12.65	66
Delaware.....	N4D3	9.30	.....	21.28	139
Exeter.....	N4D6	6.00	.....	12.25	131
Preston.....	N6D1	10.98	103	22.48	203
Galt.....	N6D2	3.10	.....	3.25	26
Baden.....	M7D1	.....	.....	5.50	36
St. Jacobs.....	N7D2	1.70	.....	2.70	51
Tavistock.....	N8D1	.....	.....	3.70	49
Woodstock.....	N10D2	33.00	2	57.63	249
Ingersoll.....	N10D3	.....	.....	0.12	1
Tillsonburg.....	N10D4	.....	.....	1.50	.....
St. Thomas.....	N11D1	.....	.....	22.30	29
Aylmer.....	N11D2	6.00	1	6.00	1
Brant.....	N12D1	10.00	.....	13.90	94
Waterford.....	N12D3	.....	.....	0.19	1
Drumbo.....	N12D5	7.50	65	7.50	77
Simcoe.....	N12D6	.....	.....	0.23	11
Streetsville.....	N13D1	.....	.....	1.41	4
Brampton.....	N13D2	.....	.....	1.13	4
Chatham.....	N14D1	22.80	86	27.38	136
Ridgetown.....	N14D2	25.20	.....	25.20	135
Sarnia.....	N14D4	.....	.....	9.75	.....
Petrolia.....	N14D5	.....	.....	1.33	10
Wallaceburg.....	N14D13	8.00	.....	23.10	62
Sandwich.....	N15D1	5.70	37	6.14	68
Belle River.....	N15D2	7.00	.....	12.50	114
Woodbridge.....	N16D1	.....	.....	1.86	18
Saltfleet.....	N17D1	43.50	362	59.90	624

## RURAL DISTRIBUTION SYSTEMS CONSTRUCTED—Continued

Rural power district	Property number	At October 31, 1922		At October 31, 1923	
		Miles of primary line constructed	Number of consumers receiving service	Miles of primary line constructed	Number of consumers receiving service

## ESSEX COUNTY SYSTEM

Kingsville.....	J4D1	.....	.....	4.00	86
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## SEVERN SYSTEM

Barrie.....	S4D1	.....	.....	5.20	20
Nottawasaga.....	S5D1	4.00	59	4.00	63
Stayner.....	S10D1	.....	.....	11.00	105

## EUGENIA SYSTEM

Flesherton.....	E1D1	1.56	18	1.76	19
Ripley.....	E24D2	.....	1	.....	1
Walkerton Quarries.....	E26D1	1.60	4	1.60	4

## WASDELLS SYSTEM

Cannington.....	W3D1	1.25	3	1.25	3
Port Perry.....	W7D2	.....	.....	.....	13
Mariposa.....	W9D1..	.....	.....	18.50	104

## ST. LAWRENCE SYSTEM

Prescott.....	L2D1	13.55	66	13.55	66
Brockville.....	L3D1	6.50	27	8.26	27
Chesterville.....	L5D1	3.25	13	3.25	13
Martintown.....	L13D1	0.25	26	2.90	47

## OTTAWA SYSTEM

Nepean.....	T1D1	18.61	78	25.00	109
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## CENTRAL ONTARIO AND TRENT SYSTEM

Kingston.....	C44D1	.....	.....	10.80	54
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<sup>a</sup>Indicates that part of construction shown had been built previously and later transferred to rural power district capital.

## RURAL DISTRIBUTION SYSTEMS CONSTRUCTED—Concluded

## SUMMARY

System	At October 31, 1922		At October 31, 1923	
	Miles of primary line constructed	Number of consumers receiving service	Miles of primary line constructed	Number of consumers receiving service
Niagara system.....	284.05	1,216	494.35	3,431
Essex County system.....			4.00	86
Severn system.....	4.00	59	20.20	188
Eugenia system.....	3.16	23	3.36	24
Wasdells system.....	1.25	3	19.75	120
St. Lawrence system.....	23.55	132	27.96	153
Ottawa system.....	18.61	78	25.00	109
Central Ontario and Trent system.....			10.80	58
Total.....	334.62	1,511	605.42	4,169

## DISTRIBUTION FEEDERS CONSTRUCTED

Line and property number	Voltage	Phase	Date work was commenced	Date work was made alive	Date work was completed	Mileage
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## NIAGARA SYSTEM

Grimsby to Growers' Cold Storage.....N153x23	4,000	3	Oct. 15, 1923			0.46
Sunnyside to Sutton...N26x310	4,000	3	July 16, 1923	July 18, 1923	July 21, 1923	2.5
Mountjoy to StouffvilleN342x11	4,000	3	Aug. 20, 1923	Sept. 25, 1923	Sept. 24, 1923	6.4
Hespeler to Christie, Henderson Co.....N604x5	4,000	3	June 18, 1923	Oct. 6, 1923	July 27, 1923	3.2
Ayr to H.O. Cereal Co. N1240x18	4,000	3	Mar. 14, 1923	Mar. 28, 1923	Mar. 30, 1923	1.5
Fletcher to Merlin....N1455x26	4,000	3	Nov. 7, 1922	Dec. 21, 1922	Dec. 21, 1922	4.7
Corunna to Courtright.N1488x28	4,000	3	Oct. 17, 1923			4.5
Belle River Station to Belle River.....N1538x8	4,000	3	Oct. 26, 1922	Dec. 5, 1922	Dec. 5, 1922	0.14
Atlas Brick Co. to Christie, Henderson Co.....NCR143	2,300	3	Feb. 19, 1923	Mar. 14, 1923	April 20, 1923	1.8

## EUGENIA SYSTEM

Chesley to Paisley....E4x402	4,000	3	May 29, 1923	Aug. 13, 1923	Aug. 13, 1923	10.7
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## CENTRAL ONTARIO AND TRENT SYSTEM

Warkworth substation to Warkworth.....C49x1	2,300	1	June 29, 1923	Sept. 29, 1923	Sept. 29, 1923	3.5
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## DISTRIBUTION FEEDERS CONSTRUCTED—Concluded

## SUMMARY

System	Mileage
Niagara system.....	25.2
Eugenia system.....	10.7
Central Ontario and Trent system.....	3.5
Total.....	39.4

## METERING STATIONS CONSTRUCTED

Station	Pro- perty number	Date work was completed	Measuring power for
NIAGARA SYSTEM			
H.O. Cereal Co.....	N1248	Mar. 28, 1923	H.O. Cereal Co., near Ayr.
Christie, Henderson Company...	N635	July 27, 1923	Christie, Henderson Co., near Hespeler.
Sutton.....	N340	Sept. 24, 1923	Municipality of Sutton.
Dundas.....	N2D31	May 2, 1923	Dundas rural power district.
Otterville.....	N1038	Aug. 26, 1923	Municipality of Otterville.
Mchawk Sand & Gravel Co.....	N1250	July 12, 1923	Mohawk Sand & Gravel Co., near Brantford.
Markham.....	N3D31	Dec. 31, 1922	Markham rural power district.

## SEVERN SYSTEM

Barrie.....	S4D31	Aug. 21, 1923	Barrie rural power district.
Stayner.....	S10D31	Aug. 4, 1923	Stayner rural power district.

## ST. LAWRENCE SYSTEM

Lancaster.....	L1332	Oct. 9, 1923	Municipality of Lancaster.
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## CENTRAL ONTARIO AND TRENT SYSTEM

Kingston.....	C44D31	Jan. 20, 1923	Kingston rural power district.
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## MUNICIPAL DISTRIBUTION SYSTEMS CONSTRUCTED

Municipality	Date work was commenced	Date work was made alive	Date work was completed
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## NIAGARA SYSTEM

North York Township.....	<i>b</i> Sept. 25, 1923	Oct. 17, 1923	Oct. 25, 1923
Port Dover.....	Jan. 5, 1923	Jan. 15, 1923	Jan. 18, 1923
Merlin.....	Nov. 1, 1922	Dec. 21, 1922	Dec. 5, 1922
Belle River.....	Sept. 8, 1922	Dec. 5, 1922	Dec. 4, 1922
Innerkip.....	<i>a</i> Dec. 18, 1922	Jan. 27, 1923	Jan. 27, 1923
Bright.....	<i>a</i> Dec. 19, 1922	Jan. 29, 1923	Jan. 29, 1923
Stevensville.....	<i>a</i> Jan. 24, 1923	Jan. 31, 1923	Mar. 31, 1923
Shedden.....	<i>a</i> Oct. 26, 1923	Oct. 29, 1923	.....
Allenburg.....	<i>a</i> Jan. 20, 1923	Mar. 15, 1923	Mar. 15, 1923

## WASDELLS SYSTEM

Gamebridge.....	<i>a</i> Oct. 9, 1923	Oct. 11, 1923	Oct. 11, 1923
Oakwood.....	<i>a</i> Sept. 10, 1923	Sept. 18, 1923	Oct. 6, 1923
Little Britain.....	<i>a</i> Sept. 10, 1923	Sept. 29, 1923	Oct. 6, 1923

## CENTRAL ONTARIO AND TRENT SYSTEM

Warkworth.....	July 4, 1923	Sept. 29, 1923	Oct. 31, 1923
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*a* Street lighting only.

*b* 4,000-volt feeder from Yonge street to waterworks.

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Map of the  
NORTH-WESTERLY PART OF  
ONTARIO  
SCALE  
0 10 20 30 40 50 60 70 80 90 100 MILES

HYDRO-ELECTRIC POWER COMMISSION  
OF ONTARIO

# TRANSMISSION LINES AND STATIONS

AS AT OCTOBER 31, 1923

SCALE  
0 10 20 30 40 50 60 70 80 90 100 MILES

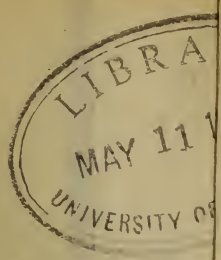
- LEGEND —
- |                       |                              |
|-----------------------|------------------------------|
| HIGH-TENSION LINES    | GENERATING STATIONS          |
| PROPOSED H-T. LINES   | PROPOSED GENERATING STATIONS |
| LOW-TENSION LINES     | HIGH-TENSION STATIONS        |
| PROPOSED L-T. LINES   | LOW-TENSION STATIONS         |
| RURAL POWER DISTRICTS | PROPOSED L-T. STATIONS       |





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